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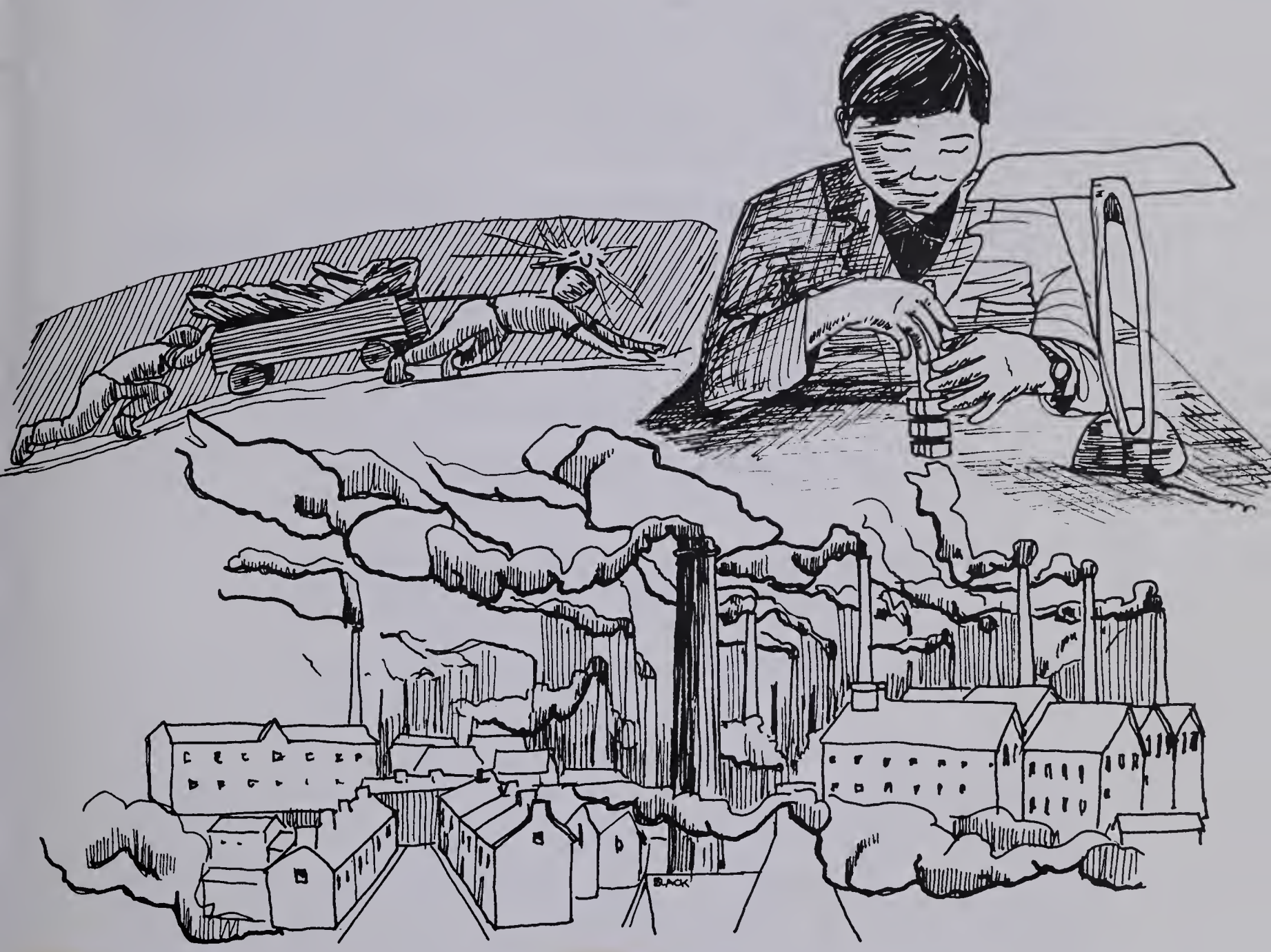

GRADE 9

People and Their Technology

TOPIC A

Industrialization: Selected Market Economies

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PREFACE

When the task of revising Alberta's social studies programme drew to a close in Spring, 1978, the Social Studies Curriculum Co-ordinating Committee turned its attention to the question of how to demonstrate the intents of the revised curriculum in specific instructional terms. After considerable consultation with teachers, it was concluded that carefully designed teaching units focusing on curriculum topics would be of great help to social studies teachers seeking to implement the revised curriculum guidelines.

Specifically, the approach taken was that a number of experienced social studies teachers, consultants and university instructors were contracted by the Curriculum Branch of Alberta Education to develop inquiry units that fulfilled the following conditions:

- addressed specific value, knowledge, and skill objectives for a prescribed curriculum topic;
- demonstrated the Alberta curriculum's "process of social inquiry";
- incorportated a wide range of teaching/learning strategies, including creative use of one or more prescribed learning resources; and
- tested out successfully in a variety of classroom situations.

This teaching unit is not prescriptive. Rather, it is intended to demonstrate one way that the rationale of the Alberta curriculum can be implemented, and one way that the objectives for the curriculum topic can be attained. Review the unit, try it out, and discuss it with colleagues. Keep in mind that it will serve its purpose if it helps you to become more creative in your teaching and more understanding of the goals of the Alberta curriculum, and if it leaves you with a feeling of fulfillment as a social studies teacher.

Although the teaching units have been piloted, a more in-depth assessment can only be obtained from teachers and students during normal classroom usage. Therefore, the evaluation questionnaires located at the end of the teaching unit should be completed and sent to the Regional Office in your area. Thank you.

Frank Crowther
Project Director

ACKNOWLEDGEMENTS

A number of people contributed significantly to the development and production of this teaching unit. Alberta Education wishes to recognize in particular the contributions of the following people.

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The Red Deer Advocate. "Mole May End Well Fires". February 7, 1979.

Yellowitz, Irwin. The Position of the Worker in American Society 1865-1896. Copyright 1969, by Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

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Turner, Helen. Talking About the Consumer Society. Wayland Publishers, 1973.

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NOTE:
Pages that are termed "Student Handout" or "Student Activity Sheets" are intended for duplication. It is imperative that these particular Teaching Unit pages be neither cut nor marked so they will continue to be useful in future years.

A. UNIT GOALS

The goals of this unit are as follows:

1. To involve students in an examination of the effects of the Industrial Revolution on society.
2. To assist students in broadening their understanding of industrialization as a process.
3. To interest students in critically analyzing and clarifying personal and public values related to industrial growth.

B. UNIT OBJECTIVES

1. VALUE OBJECTIVES

The student shall:

(a) Understand values underlying industrial growth in market economies such as work ethics, materialism, quality of life.

(b) Appreciate diverse ways in which people in market economies attempted to make use of technology to achieve value-laden goals.

(c) Use knowledge of industrialization in market economies to decide whether continued growth will enhance human welfare.

2. KNOWLEDGE OBJECTIVES

The student shall:

(a) Understand that industrialization represents a change in systems of production from human to mechanical.

(b) Understand that as part of industrialization, increases in demand for factors of production have inevitably created scarcity of one factor or another.

(c) Understand that increased production that has resulted from technological advances led to an increase in leisure time for many people, which, in turn, has created demands for new goods and services.

(d) Understand that as traditional roles and institutions become less significant in highly industrialized societies, many people suffer alienation and loss of identity.

3. SKILL OBJECTIVES

The student shall:

(a) Describe the issue in terms of key concepts (industrialization, market economy/free enterprise, land, labour, capital, quality of life, materialism).

(b) Formulate research questions to explore historical antecedents to the issue.

(c) Compare points of view on the economic and social effects of the Industrial Revolution.

(d) Formulate generalizations about the relationship between industrialization and specialization.

(e) Formulate alternative solutions to the value issue on the basis of alternative perceptions of quality of life.

(f) Create a plan of action for use of leisure time in industrialized society.

(g) Judge the worth of applying the plan in personal lifestyles.

Participation Skills

(a) Support ideas logically in describing social change as a result of industrialization.

(b) Demonstrate understanding of the dilemmas of others as they attempt to make choices for work and leisure time.

(c) Assist in a group project to relate conclusions about industrialization to an aspect of school life.

C. FLOW CHART

SHOULD WE LIMIT INDUSTRIAL GROWTH?

PART I - OPENER

Automobile Production Simulation
Focus on the Issue
Develop Research Questions

PART II - RESEARCH

STAGES OF INDUSTRIALIZATION

A. Market Economy in 18th Century England

Impact on Society

- Consumer Goods
- Working Conditions/ Attitudes
- Child Labour
- Cities
- Unions

Development of Controls

B. Market Economy Today

Changing Attitudes Toward Work
Proliferation of Goods and Services
Alienation

PART III - CONCLUSION

Synthesis of Data
Values Analysis of Alternative Positions
Alternative Solutions to Problems of Growth
Social Action

PART IV - REFLECTION

Assessment of Learning Experiences
Student Evaluation

D. NOTE TO THE TEACHER

1. General Context

This unit is intended to be a teaching resource, in that it has been specifically structured to assist in implementing "Topic A - Industrialization: Great Britain, U.S.A. and/or Japan" in Grade Nine. A variety of student activities are provided, to enable you to deal with all phases of social inquiry. Additional learning materials have been included because the primary resource, The Growth of Industrialization, does not deal with the total scope of the unit. The list of teacher resources provided has been limited only to the more useful books. If time allows, you will find reading them worthwhile.

2. Teaching Style

The style of the unit is essentially inquiry and student oriented, if you use the many classroom discussions, small group activities, and simulations as they are intended. As much as possible, (students ~~should~~ will be made to feel as though they are in charge of the discoveries and the activities.) The approach is based on telling students very little while listening intently to them a good deal of the time.

3. Optional Parts of Lessons

A number of options have been included throughout the unit. Watch and listen to students as they progress through the lessons in order to decide which optional activities ought to be avoided or included.

4. Length of Unit

Not including the optional activities, the unit should take approximately six weeks to finish. Including the optional activities, the unit could take as long as ten weeks to complete. Length of time indicated for each lesson is based on five 40 to 50 minute class periods, per week.

5. Philosophy in determining Length of Unit

The assessed time for each lesson is also based on a particular philosophy of how students learn. Time has not been given for extensive note-taking nor for rote-learning. Activities are intended to be brief and thought-provoking. If at first something is missed, there is sufficient repetition in the activities for students to grasp an idea or skill later. Use the optional activities where necessary to help bridge the gaps, but do not overwork any learning activity.

6. Integration with Language Arts

Throughout the unit, opportunities exist for integrating the activities with language arts. Wherever possible, consult with the language arts teacher for such areas as evaluating paragraphs, incorporating literature, and developing speaking, listening and writing skills.

E. EVALUATION

Evaluation is designed to be continuous and integrated within each activity throughout the unit.

Four forms of evaluation are provided as general examples which attempt to encompass the broad sphere of assessment and feedback in the classroom.

F. ONGOING EVALUATION

The first, "ongoing evaluation", ultimately leads to a cumulative mark that is easily transferable into a letter grade or a percentage, depending on the reporting system in use. The activities have been identified in the lessons along with suggestions for grading.

1. Evaluation of Specific Assignments

Lesson 2	Participation in Discussion	10
	A Position Statement	10
Lesson 5	(OPTIONAL) Technological Inventions	20
Lesson 7	Domestic/Factory Systems Chart	10
Lesson 9	Personal Ledger on the Effect of Industrialization	15
	Group Work	15
Lesson 11	Attitudes Towards Automation	10

Lesson 13	Newspaper Articles on Recent Inventions	10
Lesson 14	Materialism and Alienation	20
Lesson 16	Poster	20
	TOTAL	140 points

2. Completion/Participation

Many assignments and activities throughout the unit require only "completion" or "participation" in order to achieve objectives. Students should be given credit for their willingness to be involved in classroom activities and this willingness should be reflected in marks awarded for the unit.

Lesson 1	Satisfactory completion of paragraph assignment.	6
	Satisfactory participation in simulation.	6
Lesson 5	Satisfactory completion of questions.	6
Lesson 6	Satisfactory completion of map, graph and chart.	6
Lesson 8	Satisfactory completion of the reading and questions on free enterprise.	6
Lesson 9	Satisfactory completion of the five stations.	6
Lesson 12	Participation in survey of attitudes.	6
Lesson 15	Satisfactory completion of Synthesis Chart.	6
Lesson 16	Satisfactory completion of alternatives and consequences worksheet.	6
Lesson 17	Participation in Group Activity.	6
	TOTAL	60 points
	GRAND TOTAL FOR ONGOING EVALUATION:	200 points

G. SELF-ASSESSMENT

The second form of evaluation is directly related to the objectives of each part. It offers students, both individually and collectively, the opportunity to assess their own progress toward specific objectives. By collecting both student and teacher perceptions, opportunity exists for a sharing of assessments. In this way, the students feel that they are active participants in the educative process rather than merely the object of it. Specific instructions for self-assessment accompany each part of the unit.

H. UNIT ASSESSMENT

The third component is applied at the end or towards the end of the unit. It is the students' assessment of the unit activities in terms of how helpful they were in promoting growth.
This feedback is extremely valuable in constructing further learning activities and in providing the necessary environment for maximum learning to take place.

I. FINAL EXAMINATION

A fourth component is the cognitive test provided at the end of the unit. It provides students with a final opportunity to consolidate what they have learned. It is marked on a 30 point scale. In order to provide for a balanced evaluation, you may wish to double the weighting of the test when computing a total mark for the unit.

J. UNIT RESOURCES

1. Prescribed Student Resource

Schwartz, S., O'Connor, J.R., The Growth of Industrialization, Inquiry: Western Civilization Series, Globe Book Company, 1976.

2. Teacher References

Gidney, R.D., Man and Machine: What Price? Macmillan of Canada, 1975.

Institute for Contemporary Curriculum Development, The Industrial Revolution: Whom did it Benefit? Does it Still Continue? Cambridge Book Co., 1973.

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Yellowitz, Irwin, The Position of the Worker in American Society, 1865-1896 , Prentice-Hall, 1969.

Zimpel, W.B., Man Against Work, W.B. Eerdmans Pub., 1974.

3. Optional Activities

Occasional use is made of the following resources:

Cruxton, J.B. Wilson, D., Flashback Canada, Oxford University Press, 1978

Mennill, Paul, The Depression Years: Canada in the 1930's, Prentice-Hall of Canada, 1978

PART I

Opener

LESSONS 1 to 3

Part I is intended to create interest in the topic, Industrialization, and the issue: "Should we limit industrial growth?" The simulation in the first lesson is intended to be enjoyable but also thought-provoking. How can it be ensured that students benefit in both ways?

Presentation of the issue, "Should we limit industrial growth?" in this part of the unit may be viewed as premature if an attempt is made to arrive at a conclusion here. Use it instead to heighten awareness and to provide a focus for more in-depth inquiry. Encourage students to tolerate the uncertainty and impatience that comes with postponing the answer to a question, a very complex one at that, until later.

The activity in which students design research questions is a delicate one. As much as possible, students should feel that they are involved in directing the course of study. It is their questions, as well as those predetermined ones, that should provide the path of inquiry taken throughout the unit.

LESSON 1

PURPOSE

To create interest in the topic, "Industrialization".

OBJECTIVES

Value

(a) Identify values underlying two different means of production.

(b) Recognize that the two different means of production have both positive and negative impacts on society.

MATERIALS

1. Approximately thirty black felt pens.
2. Several coloured felt pens.
3. 8½" x 11" sheets of white drawing paper.
4. Assembly line task cards (p. 22).
5. Parts of an automobile chart (p. 29).
6. Drawing of the completed automobile (p. 28).

LENGTH

1½ periods.

PROCEDURE

1. Introduce this lesson by telling the class:

Before the massive use of machinery in industry, the craftsman was highly valued by society. He created products such as furniture, clothing, shoes, etc., for which he was rewarded

with both pay (price of the product) and a sense of self-satisfaction. The craftsman was a very proud individual. This activity today is a simulation designed to help us examine the difference between creating one unique product and being involved in mass producing it. (See NOTE on p. 18)

2. Distribute felt pens and assign the following:

Using felt pens and an 8½" x 11" sheet of white paper, sketch "The Dream Machine" (i.e., your idea of the ultimate in automobile transportation). You have twenty minutes to complete this task. When you are finished, each student's drawing will be posted on the bulletin board.

After students have been given sufficient time for completion, ask individuals to talk about what they have constructed on paper.

Focus discussion on the following:

(a) The car's good features.

(b) Reasons why people would like to buy it.

(c) Students' feelings about what they created (the product).

(d) Students' feelings about how they felt as they created their cars (the process).

3. Tell students that you are going to set up a factory to create cars for sale to the general public and that they are going to be the assembly line workers.

Line the desks up in a continuous line with a beginning and an end. Provide each student with a black felt pen and assign a specific task to each student by giving him a sheet of instructions. (See "Assembly Line", Task Cards, p. 22). Tell students that you will spend some time training them but that they will catch on quickly as the process of production of cars begins. Above all, they must do only what they are instructed to do, nothing more and nothing less. Any deviation could result in a dock in wages. Any car produced that has not been constructed exactly as prototype (first car through) will be discarded. Workers will be able to take a rest only after they have completed a certain number of cars (make it the same as the number of students in class). Production will be speeded up as the labourers become more skilled at their tasks.

Begin production by giving a stack of white 8½" x 11" sheets to the first person in line. During production, supervise workers. Keep a keen eye out for unacceptable cars, and workers not doing their job properly. If you have more students than tasks, ask some to help supervise.

Option: If you feel students will not respond to this activity, involve them in an activity such as setting up chairs in the gymnasium or collating sheets of paper to simulate working on the assembly line. Then proceed with the remainder of the lesson.

> Note: Before you begin any simulation, it may be necessary to discuss what a simulation is and how, if students are alert, special insights can be gained. For example, they may become bored as work on the assembly line progresses. Watch for specific behaviour and use this in de-briefing. See the sample questions below. Remember, it is a "fun" way to learn.

4. When car production is ended, re-arrange the class into a large discussion group facing the wall on which all the cars produced have been posted, individual and assembly line products side by side. Ask these questions:

   (a) What jobs did some of you have?

   (b) How would you describe the difficulty of completing your tasks?

   (c) At any time, was there a challenge to your ability to complete this task? If so, when and why? If not, why not?

   (d) How do you feel about the finished products? About your role in their completion?

   (e) How would you feel if you had to do that task all day? All week? All of your life?

   (f) How did you feel about the supervisors checking your work? About the cars being discarded, if any?

5. On the chalkboard, sketch a comparison chart as below and with the class's assistance, complete it, based on the previous activities.

SAMPLE COMPARISON CHART

	Craftsman Production	Assembly Line Production
1. Space required for production	(backyard, small garage)	(large factory)
2. Size of working force special skills	(one person with considerable skill)	(many people, each with minimal skill)
3. Machinery required	(simple tools)	(large number of tools, conveyor belt)
4. Investment by owner of industry	(small, enough to cover materials for one product)	(large; enough to cover building, materials, tools, wages)
5. Nature of Product	(carefully crafted, unique)	(quality questionable, many the same)
6. Impact of product	(few could own same kind of car; self-satisfaction)	(many could own same kind of car; cheaper; not tailored specifically to individual tastes)
7 Co-ordination required	(very little once materials are available)	(could not function without manager; required to organize)

6. Ask the following to involve students in an exploration of values relative to these two means of production: craftsman production, assembly line production.

   (a) What would a craftsman likely value (consider important) on the job? How do you know?

   (i) freedom
   (ii) satisfaction in his work
   (iii) pride in the product
   (iv) other (?)

   (b) Since the craftsman is in sole control of production, what can we infer about the values underlying this means of production? Why?

   (i) good quality
   (ii) personal investment in product
   (iii) other (?)

   (c) Why would the owner of a company use an assembly line as opposed to many craftsmen?

   produce more of the same product

   (d) What can we infer about the values underlying assembly line production? Why do you think so?

   (i) needs of others (society)
   (ii) make money, material wealth
   (iii) productivity (i.e., produce more for consumption)
   (iv) other (?)

7. Tell students to use their imagination in answering the next question. They can use their notebooks to jot ideas down after they have thought for a minute. Have them put their heads down on their desks. Then ask:

What would our world be like if automobiles and all other manufactured products were made by craftsmen?

List as many of their hypotheses as you can on the chalkboard. As each hypothesis is listed, ask reasons why they think so. Ask, also, if certain kinds of goods lend themselves to assembly line production more than others.

8. To assist students in keeping a record of class activities, have them reconstruct the comparison chart above in their notebooks. Also, assign the following:

Write 3 paragraphs expressing your opinion on the following questions:

(a) How does society benefit and lose from both kinds of production?

(b) If you had to choose, which of the two do you feel is the best method of production? Why?

9. Collect the paragraphs assigned above. Read them to find out if students are beginning to think about the two sides of the question to be introduced later. It is not necessary to grade them. Encouraging and facilitating comments should be written on each student's work. Select several of the best ones to be read to the class next day.

EVALUATION

Note whether each student is able to perceive answers to a question from more than one perspective. Record "satisfactory completion" of paragraph assignment if he is able to do this. Also, record "satisfactory participation" in simulation.

ASSEMBLY LINE TASK CARDS

LABOURER #1
Take a single white sheet from the pile and pass one to the labourer to your right each time he completes his task.
LABOURER #2
Take the white sheet from the labourer to the left and using the pattern of the car draw an outline of the body on the white sheet. Pass it on to the labourer on your right.
LABOURER #3
Take the white sheet from the labourer to the left and, using the pattern provided, draw the front bumper of the car on the sheet. Pass it on to the labourer on your right.
LABOURER #4
Take the white sheet from labourer to the left and using the pattern provided, draw rear bumper of the car on the sheet. Pass it on to the labourer on your right.
LABOURER #5
Take the white sheet from the labourer to the left and using the pattern provided, draw the front window of the car on the sheet. Pass it on to the labourer on your right.
LABOURER #6
Take the white sheet from the labourer to the left and using the pattern provided, draw the window in the front door of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #7

Take the white sheet from the labourer to the left and using the pattern provided, draw the window in the rear door of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #8

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear window of the car on the sheet. Pass it on to the labourer to your right.

LABOURER #9

Take the white sheet from the labourer to the left and using the pattern provided, draw the front door of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #10

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear door of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #11

Take the white sheet from the labourer to the left and using the pattern provided, draw the front door handle of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #12

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear door handle of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #13

Take the white sheet from the labourer to the left and using the pattern provided, draw the front wheel of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #14

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear wheel of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #15

Take the white sheet from the labourer to the left and using the pattern provided, draw the front hub cap of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #16

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear hub cap of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #17

Take the white sheet from the labourer to the left and using the pattern provided, draw the front fender of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #18

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear fender of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #19

Take the white sheet from the labourer to the left and using the pattern provided, draw the steering wheel of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #20

Take the white sheet from the labourer to the left and using the pattern provided, draw the front seat of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #21

Take the white sheet from the labourer to the left and using the pattern provided, draw the rear seat of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #22

Take the white sheet from the labourer to the left and using the pattern provided, draw the head lights of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #23

Take the white sheet from the labourer to the left and using the pattern provided, draw the windshield wiper of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #24

Take the white sheet from the labourer to the left and using the pattern provided, draw the tail lights of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #25

Take the white sheet from the labourer to the left and using the pattern provided, draw the hood ornament of the car on the sheet. Pass it on to the labourer on your right.

LABOURER #26

Take the white sheet from the labourer to the left and using black water colour paint the front and rear wheel. Pass the sheet to the labourer on your right.

LABOURER #27

Take the white sheet from the labourer to the left and using red water colour paint the bottom half of the body of the car. Leave unpainted the bumpers, lights, door handles, windows. Pass the sheet on to the labourer on your right.

LABOURER #28

Take the completed car from the labourer to the left and dry the paint on the car and stockpile it by pinning it on the bulletin board.

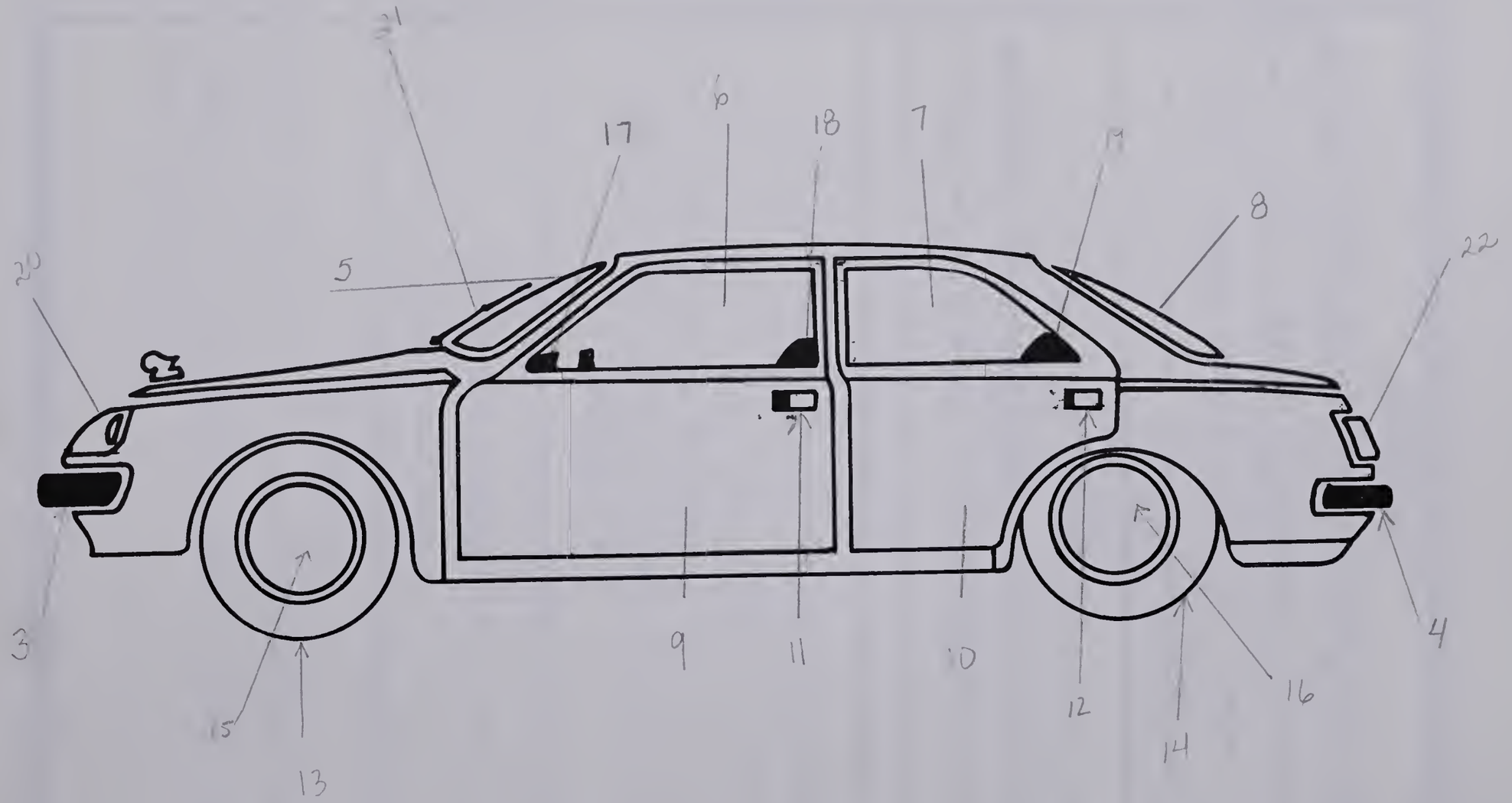


DIAGRAM OF A CAR

CHART

PARTS OF AN AUTOMOBILE

6 window in front door

7 window in rear door

20 front seat

21 rear seat

19 steering wheel

2 body

5 front window

8 rear window

23 windshield wiper

25 hood ornament

22 headlights

24 tail light

4 rear bumper

3 front bumper

18 rear fender

17 front fender

13 front wheel

11 front door handle

12 rear door handle

14 rear wheel

15 front hub cap

16 rear hub cap

9 front door

10 rear door

LESSON 2

PURPOSE

To focus on the issue.

OBJECTIVES

1. Value

   Identify a conflict in values, materialism vs quality of life as resulting from industrialization.

2. Knowledge

   Explain how change in industry results in changes in other parts of society.

3. Skill

   Develop arguments to support a personal position regarding industrial growth.

MATERIALS

1. See materials available through the Alberta Speech and Debating Society for help with the debating activity.
2. Growth of Industrialization, pages 8 to 11.
3. 1 - Responses Score Sheet (p. 37).
4. 35 - Five Strategies to Support Your Position (p. 38-40).

LENGTH

2 to 3 periods.

PROCEDURE

1. Select those paragraphs from Lesson 1 that appear to present strong cases for the different methods of production. Read

them to the class. Allow students to comment on points of view expressed.

2. Tell the students:

In many ways the craftsman represents the way in which goods (products) were made several hundreds of years ago. Since then, many changes have occurred in the production of goods - the assembly line being only one of them. These changes have contributed to industrialization and the phenomenon called the Industrial Revolution.

Ask the students:

Why do you suppose these changes are considered a "revolution"?

(many changes; great impact on society)

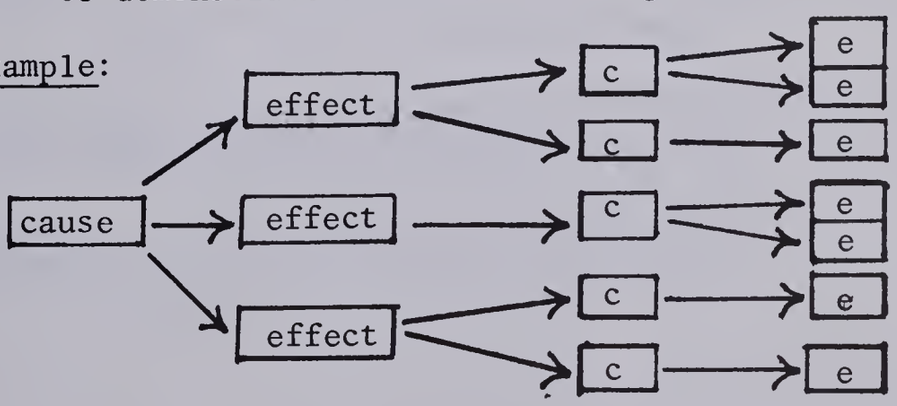
3. Present the concept of chain reaction in change and cause/effect relationships. (- something that brings about an effect or result.

(a) What happens when a billiard ball hits another?

(b) What happens when a new invention is introduced into an industry?

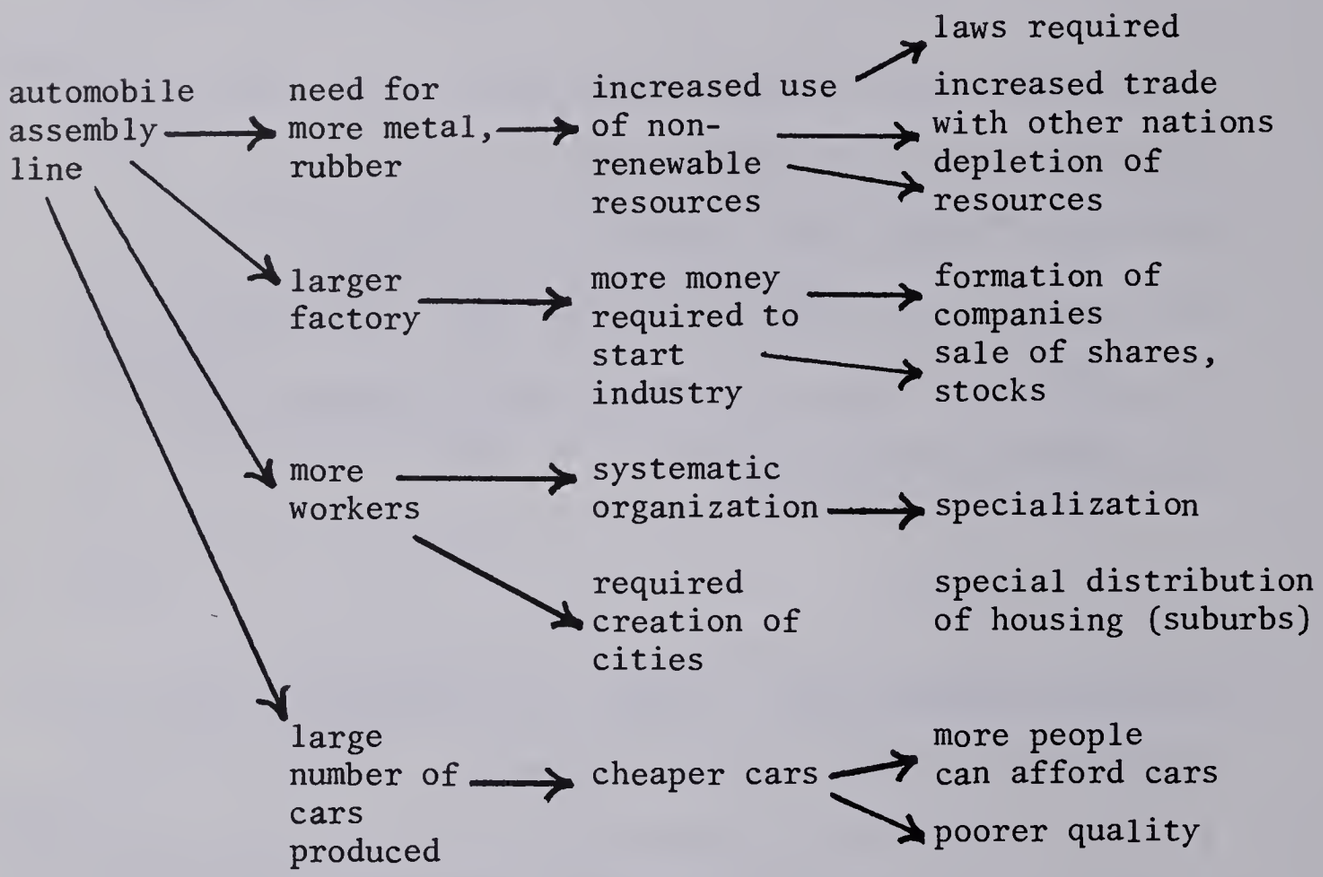
(i) Use the introduction of the assembly line in industry to demonstrate a "chain of changes".

Example:



(ii) The changes may be within the industry or may be a new product of industry and have more, far reaching effects on society.

Example:



This chart does not exhaust all possibilities. Students could add to this chain by using one of the items in the far right column as a starting point. Have several students demonstrate their chain of changes on the chalkboard.

(iii) Other effects of the Automobile Industry

Impact of differing skill and training requirements for workers as they produce automobiles rather than something else.

Investment of social capital required for automobile use (e.g., highways, "check stops"),(e.g., public use of privately owned goods).

Alternative form of transportation for moving goods (e.g., trucks rather than trains).

OPTIONAL ASSIGNMENT

Select one invention (e.g., the automobile, the aeroplane, telephone, etc.) and map out a series of cause and effect relationships.

OPTIONAL READING (Extends understanding.)

Present the idea that Karl Marx, a famous economics and political thinker, once said, "Each new invention usually creates the need for other inventions". What evidence is there to show he was right?

Have students read pages 8 , 9 , and 10, Growth of Industrialization, and answer the questions on pages 10 and 11 in their notebooks. Discuss them in class. Ask the class to form general statements which express the relationships between change and inventions. Record these in notebooks.

4. Lead students in an analysis of the last column of effects in the "chain of changes". Ask the following:

(a) What impact did this change have on the following?:

(i) economic part of society (e.g., greater variety of goods available, increased family income)

(ii) social part of society (e.g., worker alienated from product, family life disrupted)

(iii) political part of society (e.g., creation of laws regulating quality of goods, unemployment insurance)

(b) How many of these changes were good? Bad?

NOTE: Listen for student responses to 4(b) and group according to the value concepts:

(i) materialism (tendency to be highly interested in possessing material goods and benefits)

(ii) quality of life (tendency to be concerned about intellectual and spiritual matters and the pursuit of life goals)

5. Then raise the following questions:

(a) To what extent does the initiator of industrial improvements (e.g., Henry Ford of the automobile assembly line) foresee the long-term effects of the innovation?

Does anyone have control over change in society? Is that good? Bad? Why do you think so?

(b) What do you think of the idea of imposing a moratorium of 50 years before a new tool, machine, or idea can be used in industry?

(c) Should we limit industrial growth? (Introduce the question but do not dwell on it at this time.)

EVALUATION

Hold a class discussion regarding the statement "A change in industry results in progress for mankind".

1. Have students complete the following questions after discussing some strategies for developing an argument. (See Student Handout p. 38-40)

A POSITION STATEMENT

(a) Planning:

(i) What are your objectives in the case you are trying to present? (e.g., That change in industry does not always result in progress for mankind - or vice versa).

(ii) What arguments will you use to reach your goal?

(iii) What arguments will your opponents make?

(iv) How will you counteract your opponents' argument?

(v) How will you open your case?

(vi) How will you close it?

(b) Assessing:

(i) What arguments do you feel you presented most convincingly?

(ii) Did you think of new arguments as you went along? What were they?

NOTE: It is especially important that students can see different ways of building their arguments. Specific facts, at this point in the unit are not as important to this activity as the development of the arguments. You may wish to explore some materials available through the Alberta Speech and Debate Society.

Before students begin planning their arguments, provide them with the following assistance:

Tell them that there are many ways to build an argument to support their objective and that they have at least 5 different ways to approach it.

Distribute "Five Strategies to Support Your Position" and read the material with the students. (See pages 38-40.)

2. Hold the class discussion in a large "horse shoe" formation. Put your desk at the opening of the "horse shoe" so that you will be able to see all of the students and monitor responses. You may wish to ask a student to help you chair the discussion. Tell students how they will be evaluated during the discussion.

   (a) Review the rules.

   (b) List scoring criteria on the board for the discussion.

   (c) Award a maximum of:

      (i) 10 points for discussion,
      (ii) 10 points for satisfactory completion of position statement.

3. Generally, one class period should be adequate. However, if students are well prepared, two class periods may be required to allow for expanded thought.

Scoring Criteria

(a) Position stated/re-affirmed or opinion given.

(b) Related fact(s) stated to support position.

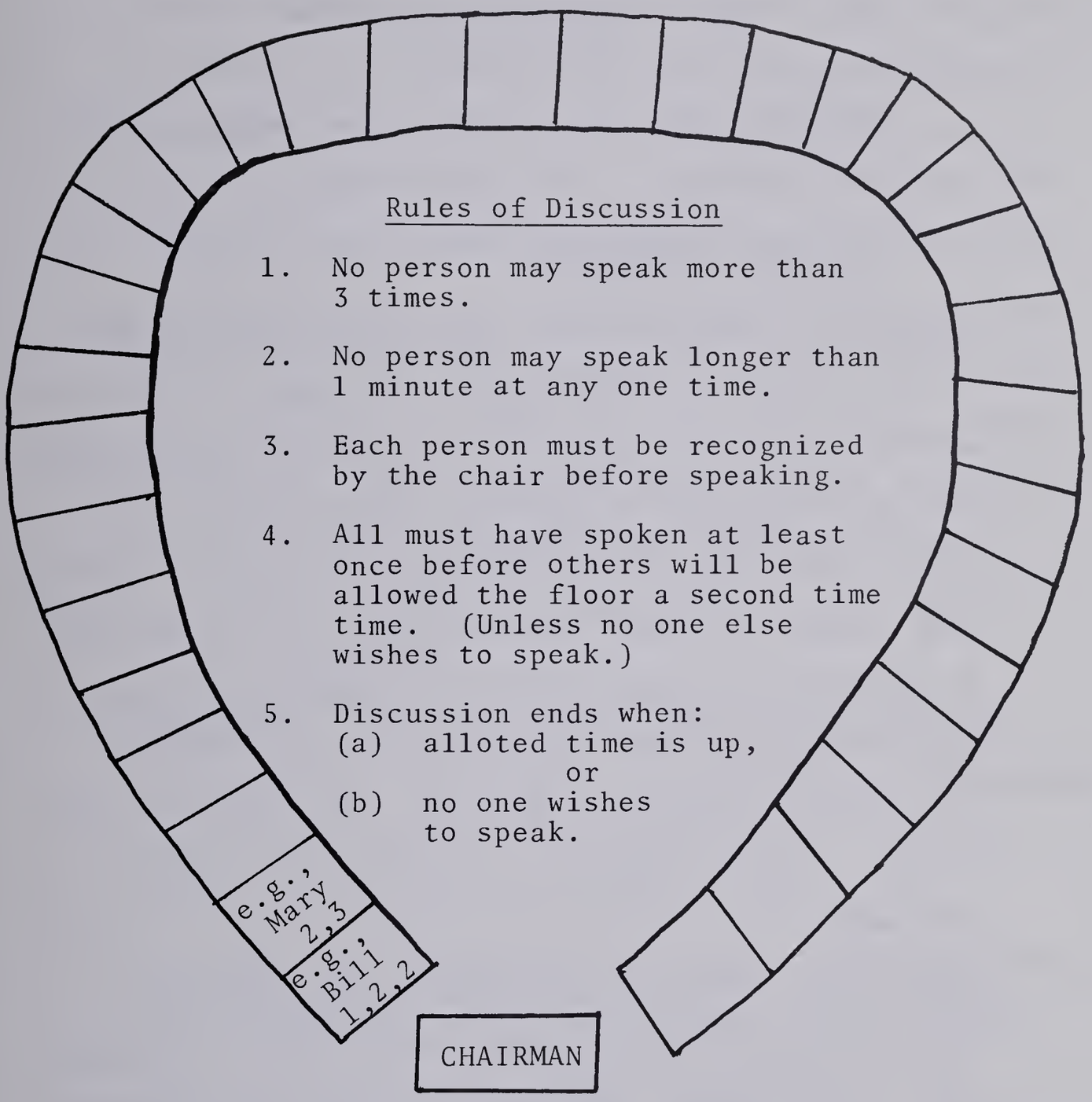
(c) Related fact(s) stated in rebuttal.

No points will be given if the response:

   (i) is off topic, or

   (ii) breaks any of the rules of discussion.

RESPONSES SCORE SHEET


Rules of Discussion
1. No person may speak more than 3 times.
2. No person may speak longer than 1 minute at any one time.
3. Each person must be recognized by the chair before speaking.
4. All must have spoken at least once before others will be allowed the floor a second time time. (Unless no one else wishes to speak.)
5. Discussion ends when:
(a) alloted time is up,
or
(b) no one wishes to speak.
e.g., Mary 2,3
e.g., Bill 1,2,2
CHAIRMAN

Scoring Criteria

1. Position stated/re-affirmed or opinion given.
2. Related fact(s) stated to support position.
3. Related fact(s) stated in rebuttal.

No points will be given if the response:

(a) is off topic; or

(b) breaks any of the rules of discussion.

FIVE STRATEGIES TO SUPPORT YOUR POSITION

Following are five strategies to support either "pro" or "con" arguments to the statement:

"A change in industry results in progress for mankind."

1. STRATEGY A - Focus on the conflict in values hidden in the statement. For example: A change in industry may be viewed as progress if you consider materialism such as being able to purchase luxuries and enjoy exotic vacations as the most important value. However, even though you enjoy "material wealth", you may not be satisfied with yourself or the quality of your life because you hate your job or the polluted air has given you bronchial diseases. The argument would consist of many examples to support this initial statement.

2. STRATEGY B - Focus on the concerns of society as expressed by different groups of citizens in everyday life. For example: Workers often lose jobs because an industry has decided to replace human labour with a machine. Workers often need to learn new skills and adapt to the requirements of new production processes. Although historically, most unemployment has been caused by the business cycle, not by

technological change, workers often believe otherwise. As workers use strikes to express dissatisfaction and strengthen demands, society loses important services and businesses suffer.

3. STRATEGY C - Focus on the facts. For example: What specific benefits are derived from industrial change? (i.e.: As a company increases production of an item, it is possible to charge less for the product, making it available for the masses.) Television, transistor radios, pocket calculators and ball point pens are some goods produced in large quantities and available to all Canadians.

4. STRATEGY D - Focus on definitions of key words in the argument. For example: A definition of "progress" may be used to defend the position that industrial change has not contributed to the betterment of mankind. Various examples could be used to support this definition. If progress means better medical care, then industrial change has benefitted us.

5. STRATEGY E - Focus on what should be done to alleviate the problem in the statement. For example: An argument may be defended if some specific action is described and support can be found for this action. (i.e.: In order to support the idea that industrial

change is progress, you might suggest that all changes adopted by industry be investigated for their potential impact on society and modified wherever harmful effects occur. Microwave ovens and medicinal drugs could be cases in point. Government regulations are important in a technological society to ensure that new ideas or inventions are entirely beneficial.

LESSON 3

PURPOSE

To develop research questions.

OBJECTIVES

1. Value

   Identify the values underlying the issue.

2. Skill

   (a) Design questions to guide research into industrialization.

   (b) Critically examine arguments related to the issue: Should we limit industrial growth?

MATERIALS

1. 35 - "Position A" (p. 45-46)
2. 18 - "Position B" (p. 47-48)
3. 18 - "Position C" (p. 49-50)
4. Sample Chart (p. 51)

LENGTH

1 to 2 periods.

PROCEDURE

1. Introduce the lesson with a review of the last class's activity.

   (a) What was the important question we were examining?

   (b) What important ideas did the class discuss?

   (c) What general impressions do you have regarding the activity?

2. Tell students that the central issue for this unit is as follows:

Should we limit industrial growth?

(a) Point out that the question implies specific kinds of learning before it can be answered fully.

(i) Knowledge about industrialization and its affect on humans.

(ii) Understanding of the values and the value conflict within the question.

(iii) A personal decision about what should be done.

(b) In order to answer this question, what must we find out? On scrap paper, jot down 5 questions, each beginning with a "who", "what", "where", "when", "why", or "how" and be prepared to share them with the class.

(c) After 5 to 10 minutes, ask students to read their questions out loud.

(i) Try to jot on the chalkboard all questions that conform to the criteria:

- Begin with 5 W's or 1 H.
- Relate to the issue.
- Are not duplicates.

(ii) Listen especially for these questions but accept all legitimate questions:

- What is the Industrial Revolution?
- What caused it?
- How did the market economy develop and operate?
- How does it operate today?
- What impact did it have on Eighteenth and Nineteenth Century English society? On Canadian society today?
- What controls were necessary to check the excesses of the system?
- What controls are necessary today?

OPTIONAL (To assist in designing questions)

If students are not able to formulate what approximates the questions listed above, proceed with the following activity:

(a) Distribute copies of "Position A" and read with the class. When completed, ask them the following:

What position does this writer take to the issue, "Should we limit industrial growth?" How do you know?
(Industrial growth should be limited because we have lost control of the system. The economic system is using us for its own ends. The quality of our lives is deteriorating).

What values seem to underly this writer's position?
(He seems to believe that material wealth is not as important as a high quality of life.)

What questions does this writer raise about industrial growth? (What are the excesses of the present system? What controls are necessary? What impact did industrialization have on society when it first began?)

NOTE: Position B is set in a Nineteenth Century context. What are the implications for comparing positions in two different historical contexts? Is Position B relevant today?

3. Record the students' questions on a large paper (large enough to be read from any part of the room) and post it on the wall. (A student may wish to perform this task.) These questions provide the focus for the collection of data throughout the unit. As each lesson is completed students should be reminded of these questions.

> NOTE: The sample chart is a suggestion only and should only be used as a guideline for the teacher (p. 51).

4. Complete Part I: Teacher and Student Evaluation Checklist (p. 52) with students.

POSITION "A"

Industrialization has not resulted in a good life for mankind. Consider this:

If a person tries to possess things in life just because his friends and neighbours do, he may build up an impressive collection of the latest in luxuries without really finding happiness. Many people today are saying: "Yes, we have been able to afford a comfortable home, an expensive car, a colour television, a boat, and two snowmobiles, but has this really improved the quality of our lives?" These people are not satisfied because, in order to own all the "good" things an industrialized society has to offer, they have spent a large part of their lives struggling to buy goods that they really do not need. In a way, they have been fooled into believing what all the commercials on television and other media have been telling them, that the good life can be found in a can of deodorant spray or in owning the latest labour-saving gadget. For all our sophistication, it seems strange that more people do not realize that we are victims of the Industrial Revolution. Ever since it began, people have spent their lives at work producing material goods and on their days off, they spend their time consuming these goods.

Because the system as it is presently organized demands a growing rate of consumption, industry must create needs solely to satisfy an increased ability to produce goods. It is becoming very difficult for the consumer to sort out what he really needs and what he has been told that he needs. People get caught up in the rush for new things, and friends become judged by what they own instead of who they are.

POSITION "B"

Much has been written on the effects of the Industrial Revolution on society. Some, impressed by the workers struggle with machines, child labour, and the squalid conditions of urban housing, have written that it brought little but misery and poverty. But research proves otherwise. While it is true that the rise of prices after 1793 made many humble people in industrial England poorer, before the end of the war in 1815 industrial wages caught up with retail prices, and although in 1831 the cost of living had risen by 11 per cent since 1790, wages had increased by 43 per cent.

It would have been strange, indeed, if the Industrial Revolution had simply made therich, richer and the poor, poorer. For the products to which it gave rise were not, in general, luxuries, but necessities. The cottons and woolens, and food and drink, which now became available, were consumed not by the few, but by the majority of the people.

It is true that hours of labour were long and holidays few; there is a mass of evidence that employment in factories was harmful to the health and morals of the young also. A leading politician has recently spoken of the "mechanized horrors of the Industrial Revolution", and there can be little doubt that the deeper mines and

more complicated machines brought new risks of mutilation and death. But against all this must be set the lessening of strain on those who worked in the heavy trades, and the decline in the number of crippled and deformed people that followed the introduction (in the hours of work for) women and young children, the rise in family earnings, the greater regularity of pay, and the gain in welfare that came as industrial work was taken out of the home...

Copyright: Gidney, Richard D., Man and Machine: What Price?, p. 48 - 50

POSITION "C"

Growth in industry was believed to bring society a stream of benefits in the form of rising material wealth. In the early days of the Industrial Revolution, people believed that it was not only natural for an industry to grow in size, but that growth should be its prime goal.

Today, because of this growth, we are said to be twice as "rich" as our parents, four times as rich as our grandparents, and incalculably richer than our distant forefathers. But no one would say that we are two or four times happier, or more content, or more fulfilled as individuals than they. More and more we ask if growth is not a mixed blessing, bringing additional material wealth on the one hand, but also bringing unpleasant or dangerous side effects on the other.

People are becoming concerned about the rapid use of non-renewable resources and about the eventual inability of the earth to absorb waste products. Today, global industry produces about 7% more than it did last year. Every 10 years, it doubles production. If industrial growth continues, in 50 years the rate of use of resources would have doubled five times. Consider also that each year, Americans, for example, throw away the following:

(a) 214 million tons of carbon monoxide, sulfur oxides, hydrocarbons, particulates, and nitrous oxides (over a ton per American)

(b) 55 billion tin cans (275 for each person).

(c) 20 billion bottles (100 apiece).

(d) 65 billion metal and plastic caps (325 each).

(e) 7 million cars

(f) 10 million tons of steel and iron scrap (an average of 1,000 pounds each).

(g) 150 million tons of garbage and trash (4.1 pounds per person daily).

The immediate impact on humans is evident already, in statistics on increase in cancer and lung diseases. We can only guess at the cost to humans of the long-term effect.

Copyright: Heilbroner, Robert, The Making of Economic Society, p. 189 - 192

SAMPLE CHART

	POSITION	REASONS	VALUES	QUESTIONS
A.	Limit Industrial growth	System out of control Consumer is being manipulated by industry Quality of life deteriorating.	Quality of life (personal satisfaction, happiness, human worth)	1. What impact did industrialization have on society when it first began? 2. What are the excesses of the present system? 3. What controls are necessary?
B.	No need to limit Industrial growth	Increased standard of living Provided for basic needs of the people Rise in family earnings Gain in Welfare	material wealth (see reasons) (also materialism)	1. What benefits did the revolution bring? 2. How did the economic system operate to ensure the provision of basic needs?
C.	Limit industrial growth	Despite increase in wealth, problems of growth are evident Use of non-renewable resources Pollution	Quality of life and material wealth (Both are important)	1. How well does the system operate today? 2. What controls are necessary to check the excesses?

Teacher: _____ Student: _____

PART I: TEACHER & STUDENT EVALUATION CHECKLIST

The following areas reflect the objectives of this part of the unit. Rank each according to the following:

1. Working up to ability, doing well (understands material).
2. Could be working harder, do a little better.
3. Not really trying at all.

NC Not covered yet in this unit.

If there are large discrepancies between our ratings, we will meet for a conference.

	Rating
1. Can identify values underlying two different means of production.	_____
2. Can list positive and negative impacts of both "craftsman" and assembly line production.	_____
3. Can explain the conflict between the values of "materialism" and "quality of life".	_____
4. Can use an example to show how change in industry results in change in other parts of society.	_____

5. Can identify three different arguments related to the issue: Should we limit industrial growth? _____

COMMENTS: _____

_____

_____

PART II

Research

A. Market Economy in Eighteenth Century England

(Lessons 4 - 10)

This part of the unit is intended to lead inquiry into the historical development of industrialization. Conceptually, this portion examines the first stage of the Industrial Revolution, also known as the mechanization stage. The historical and geographic setting is 18th century Great Britain, although some comparisons are made with development in Canada during the same stage of development.

Specific Research Questions:

1. What is the Industrial Revolution?
2. What caused it?
3. How did the market economy develop and operate?
4. What impact did it have on 18th and 19th century English society?
5. What benefits did the Industrial Revolution bring?
6. What controls were necessary to check the excesses of the system?

LESSON 4

PURPOSE

To assist students in understanding an historical perspective of the Industrial Revolution.

OBJECTIVES

1. Knowledge
   (a) Identify two different views of how the Industrial Revolution began.
   (b) Identify a basic process of industrial growth.
2. Skill
   Analyze an historical phenomenon from two points of view.

MATERIALS

1. The Growth of Industrialization, p. vii-ix.
2. 35 - "Different Historical Views on the Industrial Revolution" (p. 59-62).

LENGTH

1 period.

PROCEDURE

1. Read several paragraphs from the book, The Growth of Industrialization, (p. vii-ix) to the class and ask students:
   (a) How many thought what was read is true? False? How do you know?
   (b) What is fact? Opinion? How can you tell the difference?

(c) How many of you think history books are mostly fact? Mostly opinion? Why?

(d) When two people examine the same phenomenon, do they report the same things? Why?

(e) What problems do historians encounter when writing history books?

2. Distribute the article, "Different Historical Views on the Industrial Revolution" to each student. List the following difficult words: feudal times, mechanical inventions, revolution, industry, factory system, mass production and any other words which may cause difficulty in reading the article. Discuss each one and, where possible, elicit or supply examples.

3. Tell students: Read the article, looking for an answer to the question: "How do the two views of the Industrial Revolution differ?"

If possible, see librarian regarding arrangements for resources needed for Lesson 5 at this time.

4. With the class, list the main characteristics of the two views on the board and ask:

(a) Which of the two is most believable? Why?

(b) What are the implications for accepting either point of view?

5. Have students record the basic process of industrialization as outlined in these articles in their notebooks. You may wish to assist the class by outlining the process with the students on the chalkboard.

DIFFERENT HISTORICAL VIEWS OF THE INDUSTRIAL REVOLUTION

A. For years historians have been arguing about the origins of the Industrial Revolution. Most traditional historians believe that it began in England in 1760 and they support this belief with carefully selected evidence.

One noteworthy historian, Arnold Toynbee, declares that prior to 1760, little significant change had taken place in England. The old industrial system left over from feudal times, he maintains, was still in operation. None of the great mechanical inventions had been used widely enough to have an impact on society. Toynbee and others base their arguments on the hypothesis that the inventions of the textile industry in eighteenth century England caused the revolution to occur. Since most of these machines were in use by 1800, these historians often use this date to mark the end of the revolutionary period.

The following INVENTORS and EVENTS are often used by historians to illustrate the development of the Industrial Revolution:

1733 - JOHN KAY invented the FLYING SHUTTLE.

This machine made it possible to produce twice the amount of cloth that could be woven by hand.

1764 - JAMES HARGREAVES invented the SPINNING JENNY.

This hand-operated machine enabled spinners to keep up with the increased production of weavers.

1769 - RICHARD ARKWRIGHT invented the WATER FRAME.

This was a heavy spinning machine operated by water power rather than human muscles. The use of this invention led to the factory system, for now workers came to the water-powered factories usually located near a stream. Prior to that, most of the work was done in cottages where the workers lived.

1774 - SAMUEL CROMPTON invented the SPINNING MULE.

This machine made it possible to use steam power in the spinning of threads. It combined the best features of the spinning jenny and the water frame. One man could supervise over 800 spindles of thread at once.

1785 - EDMUND CARTWRIGHT invented a POWER LOOM.

The production of thread increased to such an extent that the weavers were unable to keep pace. The invention of a power loom helped to speed up the weaving.

Each invention led to bigger and better machines requiring more and more money for labour, machinery, and raw products. The quantity and quality of thread had improved so that fine cloth could be mass produced. With the increased production of these goods came increased wealth. Profits could be re-invested in the industry making it possible to expand. Thus, the process of industrial growth had begun.

History, therefore, can be listed in terms of special individuals and a sequence of important events, much like the characters and events outlining the main plot in a novel.

B. The traditional view of the Industrial Revolution has been criticized for its simple explanation of a very complex period of history. Other historians argue that many factors contributed to its development, without which the inventions would have been useless. As countries still in the process of industrialization realize, certain conditions in all parts of society are necessary for such a revolution to occur.

Economists also agree THAT CERTAIN ECONOMIC FACTORS MUST BE PRESENT IN SOCIETY FOR INDUSTRIAL GROWTH. For example, power is required to drive machines and sufficient labour to run them. Money and skilled

manpower is needed to build and equip factories. Raw materials for industry and food for labourers must be available. Good transportation systems are required to help move raw materials, goods and people. Markets are needed for the sale of goods produced by industry.

Historians point out that each of these conditions existed in eighteenth century England.

Further, many historians criticize the use of the term "REVOLUTION" because it is misleading. It seems to suggest an abrupt beginning and ending. Also, unlike the American Revolution in 1776, and the French Revolution in 1789, this revolution was NOT a sudden, violent, upheaval of society. Instead, the economic conditions necessary for industrial change took at least a hundred years to develop; and the changes in society resulting from it, although widespread, were gradual.

Many historians also believe that the INDUSTRIAL REVOLUTION CONTINUES TO HAVE AN IMPACT ON THE PRESENT as it did in "eighteenth century England". In fact, the INDUSTRIAL REVOLUTION PROBABLY NEVER ENDED AT ALL.

LESSON 5

PURPOSE

To introduce students to the nature of the Industrial Revolution from a technological perspective.

OBJECTIVES

1. Knowledge

   (a) Describe the three stages of the Industrial Revolution.

   (b) Explain how the Industrial Revolution represents a change in methods of production from human to mechanical power.

2. Skill

   (a) Generalize from a data retrieval chart about the nature of the Industrial Revolution.

   (b) Hypothesize about its impact on man and society and the impact on labour/employer relationships.

MATERIALS

1. The Growth of Industrialization, p. 2 - 6, 14 - 15, 16 - 18.
2. Use of the Library.

   Example: World Book Encyclopaedia
   How Things Work, Vol. I & II
   Paladin Grenada Publishing Ltd. 1978

3. Data Retrieval Chart (p. 70).
4. Nature of the Stages of the Industrial Revolution (for the teacher, p. 71).
5. Large wall chart for student hypotheses and questions.

LENGTH

1 - 4 periods.

PROCEDURE

1. Review the idea that the Industrial Revolution never ended, but moved through three stages of increasing impact on man.
2. Outline the stages for the class as follows:
   (a) Stage of Mechanization.
   (b) Stage of Mass Production.
   (c) Stage of Automation.

   N.B. Refer to attached Nature of Stages of the Industrial Revolution (for the teacher)

3. For an overview of the stages, do the following:
   (a) Mechanization: read p. 2 - 6 Growth of Industrialization which traces the development of the textile industry.
   (b) Mass Production: assign reading p. 14 - 15, Growth of Industrialization. After students have read the article, discuss the questions on p. 15.
   (c) Automation: show a picture of a robot to the class (e.g., Artoo Detoo). Discuss the characteristics of a robot. "What is unique about this machine?" Assign reading p. 16 - 18, Growth of Industrialization. Discuss questions on page 18.
4. Optional: (useful for extending understanding)

   Introduce a research project by telling students: You will be examining in-depth, selected technologies representative of the three stages of industrialization and the impact new technology has on humans. This will be done in small

groups.

Break class into 6 research groups and assign the following topics:

Stage of Mechanization:

(a) Topic A - Mechanization of the textile industry.

Sub-topics: (one per student in group)

(i) Arkwright's water frame.

(ii) Crompton's mule.

(iii) Hargreave's spinning jenny.

(iv) Kay's flying shuttle.

(v) Eli Whitney's cotton gin.

(vi) Howe's sewing machine.

(vii) Cartwright's power loom.

(viii) Other (?)

(b) Topic B - Mechanization of the coal and iron industry.

Sub-topics: (one per student in group)

(i) Newcomen engine (water pump).

(ii) Watt's steam engine.

(iii) Darby method of making steel.

(iv) Davy's safety lamp.

(v) Bessemer's process for making steel.

(vi) Henry Cort's iron rollers.

(vii) Buddle's suction fans.

(viii) Other (?)

Stage of Mass Production:

(a) Topic A - Manufacturing in the automobile industry.

Sub-topics: (one per student in group)

(i) Conveyor belt.

(ii) Specialized division of labour.

(iii) Taylor's time motion study.

(iv) Other (?)

(b) Topic B - Manufacturing in the tool-making industry.

(standardization)

Sub-topics: (one per student in group)

(i) Hydraulic punch.

(ii) Electrolysis process.

(iii) Casting molds.

(iv) Statistical and scientific checks on quality.

(v) Other (?)

Stage of Automation:

(a) Topic A - Computers in Continuous Process Industries.

Sub-topics: (one per student in group)

(i) Computers in an oil refinery.

(ii) Automated steel plant.

(iv) Automated bakery.

(v) Other (?)

(b) Topic B - Computers in Other Industries.

(Service i.e., not goods producing)

Sub-topics (one per student in group)

(i) Airline office automation.

(ii) Computers in banks.

(iii) Computers in retail stores (e.g., The Bay)

(iv) Other (?)

5. Prior to research in the library, help students prepare guide questions in the following areas:

   (a) Purpose of technology.

   (b) Description of the technology. (tools and/or knowledge)

   (c) Description of the historical and geographic setting.

   (d) Impact on the industry: needs, requirements for implementation, impact on worker, improvements resulting from implementation, impact on production.

   (e) Impact on society. (long term) (may require inference/ hypothesis)

6. After questions and procedures for organizing information have been approved, either through total class discussion or in each of the small groups, allow library research to begin. Provide approximately 2 - 3 periods for data collection.

> NOTE: It may be helpful to students if possible sources of information are discussed prior to research. For example World Book Encyclopedia, some science books, and field trips may be considered. See also How Things Work.

7. Students should work on organizing the data for presentation, in the classroom. In addition to writing the following on the

chalkboard, you may wish to say also: I will be looking at your work in two forms:

(a) A folder of carefully organized data relating to the research questions and bibliography or illustrations.

(b) An oral presentation to the class which will take place in two parts:

(i) Background description of each of the machines or ideas including sketches or illustrations.

(ii) One group report on the following: Description of the geographic and historical setting; impact on the industry; impact on society (inference/hypothesis - must be indicated as such, however.)

8. After each pair of groups have presented a stage of the Industrial Revolution, assist the students in completing the pertinent part of the data retrieval chart. It may be useful to prepare a large chart on the board or on a large piece of newsprint.

9. Utilizing the Data-Retrieval Chart, (p. 70) discuss with students the nature of the three stages of the Industrial Revolution by carefully examining each of the vertical columns. For example, you might proceed by saying:

(a) Look carefully at the data under the first column, entitled mechanization, and think about the ideas listed there.

(b) What ideas seem to describe this stage of the Industrial Revolution best?

(c) What can we infer about this stage of the revolution? Can we generalize, also?

Then move on to the next vertical column.

10. Record these hypotheses and general statements in a prominent place in the classroom, along with questions that have been raised for which no immediate simple answer can be found. Throughout the unit, continually draw the students' attention to these ideas and questions in order to test them. Modify and add to the list. Students should be encouraged to keep a record of these ideas. Students may record important ideas gained in their notebooks as well as a copy of the chart.

EVALUATION

Check for completion of questions identified on page 64.

EVALUATION (OPTIONAL)

Collect student work as described on pages 67 and 68. Award marks on the following basis:

1. Folder of research questions, data, bibliography. (Range in quality and completeness from "1 - poor" to "5 - excellent"). _____ 5

2. Oral presentation - content and mechanics. (Content: "1 - incomplete" to "5 - interesting and accurate"; mechanics: "1 - poor delivery" to "5 - clearly presented"). _____ 10

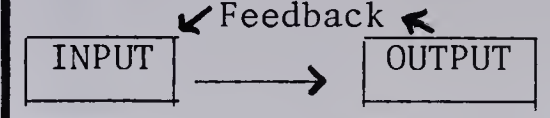
3. Data Retrieval Chart. (Range in completeness from 1 - 5 points). _____ 5

TOTAL: _____ 20

DATA RETRIEVAL CHART

	MECHANIZATION	MASS PRODUCTION	AUTOMATION
PURPOSE AND NATURE OF TECHNOLOGY			
GEOGRAPHIC/ HISTORICAL SETTING			
IMPACT ON PRODUCTION			
IMPACT ON SOCIETY			

Nature of the Stages of the Industrial Revolution

	1st Stage Mechanization	2nd Stage Production	3rd Stage Automation
Technology (Tools & Knowledge)	Based on forms and applications of power	Based on principles of production organization	Based on communication and control 
Role Of Machines	Dependent machines fed, controlled, and regulated by man's hands	Semi-automatic machines operated by man; some operations can be performed alone	Automatic machines, individual operator eliminated; man functions as supervisor
System Of Production	Created the factory system and separated labour and management in production	Forced ownership of industry to be separate from management because assembly line and other machinery so expensive ownership atomized into millions of separate shareholdings	Turned factory from a haphazard collection of machines into a single integrated unit requiring production on an enormous scale, as a result of automatic control and decision-making
Time Span Of Industrial Revolution	c. 1760 → c. 1914	c. 1914 → c. 1945	c. 1945 → Present

NOTES:
1. The stages are cumulative and developmental.
2. All stages can be found in modern society in varying degrees.
3. Under-developed countries, presumably, must progress through all three stages to become as industrialized as some western countries.

LESSON 6

PURPOSE

To explore reasons why the Industrial Revolution began in England.

OBJECTIVES

1. Knowledge
   (a) Explain relationships between physical features and industrialization.
   (b) List events that led to the availability of human resources for industrial growth, during the Industrial Revolution.
2. Skill
   (a) Construct a chart demonstrating relationships between geography and industrial growth.
   (b) Construct a graph from data.

MATERIALS

1. 35 copies - Outline Map of England (p. 77).
2. 35 copies - "Improvements in Agriculture and the Enclosure Acts" (p. 78-80)

LENGTH

2 periods

PROCEDURE

1. Begin by posing the question: "Why did the Industrial Revolution begin in England?" Allow the students time to offer hypotheses. Most will likely reflect what was learned in previous lessons (e.g., technological inventions). Collect student hypotheses on the board. Then help students extend the list. If none of the

hypotheses relate to human and natural resources, ask some probing questions about what a factory needs in order to run. For example, ask the following:

(a) Where will all the workers come from, when most of the population is rural?

(b) What does industry need in terms of location?

2. As a class, review the relationship of certain physical features to development (i.e., an island, size of land, latitudinal location, number and kinds of rivers, mountainous areas, coastal plains, minerals, forests). Note examples of relationships on the chalkboard.

(a) Islands:

(i) Distances are limited.

(ii) No extreme climates.

(iii) Natural resources might have to be brought in requiring sizeable shipping industry.

(iv) Always close to water.

(b) Size of Land:

(i) If too large, will require large-scale transportation.

(ii) If too small, land for development may be limited.

(c) Latitudinal Location:

Distance from equator strong influence on climate.

Too hot/cold would mean difficult to work outdoors.

(d) Rivers:

(i) Short, rapid rivers make transportation difficult.

(ii) Long, slow-moving would assist transportation of goods.

(iii) Availability of water power.

(e) Mountainous/Coastal:

(i) Mountainous areas may mean ore resources, but can also mean transportation problems.

(ii) Good coast with harbours assists import and export of materials.

(f) Natural Resources:

(i) Abundance enhances industrial growth.

(ii) Scarcity limits industrial growth or means massive imports of resources.

3. Since the Machine Age began in England, attempt to determine the advantages and disadvantages of England's geography for industrial growth.

Assign the following:

(a) Using an atlas, locate the data listed in (b) on the map provided (p. 77).

(b) Working in small groups or pairs, make up a chart explaining the advantages and disadvantages of each physical feature in terms of industrial expansion in England.

(i) Island

(ii) Size

(iii) Latitude

(iv) Rivers

(v) Topography

(vi) Mineral deposits (e.g., coal, iron ore)

(vii) Forests

PHYSICAL FEATURE	ADVANTAGE (Why?)	DISADVANTAGE (Why?)
e.g. Island		
e.g. Size		

4. Gather data from the groups and place on chalkboard. Ask: In what specific way was England the ideal place for the beginning of the Industrial Revolution? To what extent do these features exist in our community? What is the potential for industrial growth here?

5. Present the following:

Human resources also were available for industrial development. The large number of people required for factory work was available in England for two reasons:

(a) Natural increase (see statistics below)

1701 - 6,122,000 people in England (estimated)

1771 - 7,153,000

1801 - 10,500,000 (first census)

1861 - 23,100,000

1900 - 32,435,000

1921 - 42, 800,000

Have students construct a line graph to show the population increase. It will be necessary to project population figures for the dates which do not have population figures. Have students hypothesize as to why irregularities appear in the statistics.

Optional: (Use to extend understanding of natural increase.)

(i) Discuss the rapidly growing population in terms of lowering death rates as well as higher birth rates. Hypothesize the implications for the needs of this rising population. If there had been no "Machine Age", how would this increased population have survived?

(ii) Using an historical atlas, list the number of towns in 1701 with a population of 20,000 - 100,000 and the number with a population of 100,000 - 300,000. Compare this to 1901.

What questions can we ask, or what hypotheses can we make regarding the vast changes in demographic data? List these on the chalkboard.

(b) Improvements in Agriculture and the Enclosure Acts

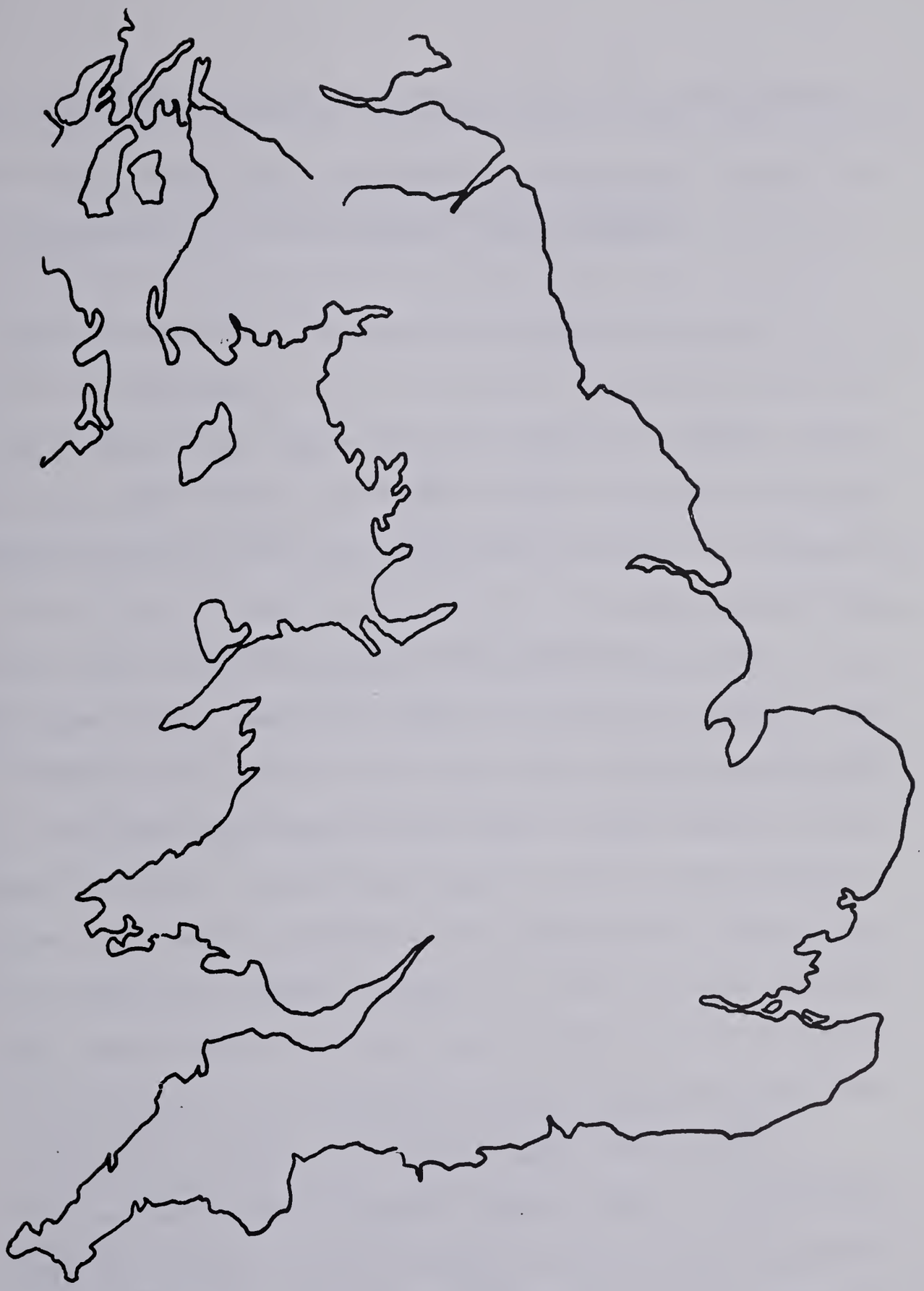
(i) Have students read the article "Improvements in Agriculture and the Enclosure Acts". Tell them to be prepared to explain why it was possible for factories in England to have a ready labour supply.

(ii) After discussion, students should jot down some ideas about the source of human and physical resources for industrial growth in England during the first stage of industrialization.

EVALUATION

Collect student work on graphs, charts, and maps. Those students having difficulty with completion should be given additional instruction in the mechanics of making graphs, charts and maps. Record completion.

MAP EXERCISE



IMPROVEMENTS IN AGRICULTURE AND THE ENCLOSURE ACTS

NOTE: The article below describes social and economic changes resulting from technological improvements in agriculture.

New scientific approaches to agriculture taken by large landowners eventually led to the release of large numbers of people from farming. Under the leadership of a few innovators like Jethro Tull (1674-1741) and Viscount Townshend (1674-1738), the following improvements were introduced:

Tull introduced (1) planting of grain seed by a horse-drawn machine, more efficient than scattering seed, and (2) cultivation of crops with a horse-drawn hoe. Townshend introduced (3) turnips as winter feed for livestock and (4) the planting of clover to fix nitrogen in the soil and increase its fertility. His four-year crop rotation of turnips, barley, clover, and wheat eliminated the custom of letting fields lie fallow and made English estates more productive.

These great improvements in efficiency were accepted by large British landowners and dramatized the effectiveness of farming large tracts rather than small scattered strips of land. For many years English farmers

had owned (or worked as permanent tenants on) small strips of land in open fields. Special areas were set aside for the use of all. These "common lands" could be used for grazing cattle, gathering firewood, and other purposes. But this system of farming was gradually eliminated by the enclosure movement.

There had been some enclosures, the fencing of formerly open fields, earlier, chiefly because the owners of large estates found sheep grazing to be an excellent way to make money. Then a new wave of enclosures began around 1760. In a series of laws, Parliament forced the fencing of common lands including about a tenth of the total area of England. The main purpose now was to take advantage of some of the agricultural improvements noted above. "Horse hoeing" demanded relatively large fields, and improved breeds of livestock could not be permitted to mingle with "lesser breeds" in open fields.

An observer had this to say:

> "A village tragedy was enacted on two thousand occasions in the last forty years of the century. The church door one Sunday morning would bear a notice that Parliament was about to be petitioned for an enclosure of common lands. The lesser villagers might protest or even riot; but with Squire himself or his friends in Parliament, and with that body composed, anyway, largely of landlords, the bill would ordinarily pass. Soon commissioners would appear to put an end to the immemorial communal life of the village. The

> common waste land would disappear, and probably the meadow and tilled land also. Each individual who shared in the old common tillage would be allotted a particular piece of land which he was to fence in, or "enclose", for his own use. The Squire and the larger freeholders or tenants, who were losing their free fuel and the pasturage for their livestock, could seldom afford the compulsory cost of enclosing their little allotments and would have to sell out their rights for a song".

The enclosure movement drove many small yeoman farmers (freeholders) from the land and promoted creation of large, efficient farms using the new methods. Britain could feed her population by using less labour, and the stage for the Industrial Revolution in Britain was set.

Copyright: Roselle, Daniel and Anne P. Young. Our Western Heritage. p. 170-171.

LESSON 7

PURPOSE

To understand the role of the capitalist in industrial growth.

OBJECTIVES

1. Value

   Identify values associated with the domestic system and with the factory system.

2. Knowledge

   (a) Identify the factors of production.

   (b) Explain the role of the capitalist in industrial growth.

   (c) Compare two economic systems - domestic and factory.

MATERIALS

1. 35 copies "The Impact of Industrialization on Economic Life" (p. 86-88).
2. The Growth of Industrialization, (p. 3-4, 5-6).

LENGTH

1 - 2 periods.

PROCEDURE

1. Review with the class the aspects of the Industrial Revolution already discussed in the unit. Jot them on the chalkboard.

   Example:

   (a) New technology (capital goods).

   (b) Availability of energy resources and raw materials.

   (c) Availability of workers; a labour force and the skills it possesses.

Say to students:

One way to look at all of these items is through the eyes of an economist, a person who studies how a society meets the basic needs (food, clothing, and shelter) of individuals. He might look at these items in terms of how they could be used to produce goods which satisfy these needs; in other words, as factors of production.

To assist students in understanding the factors of production, ask them the following:

(a) What do you need to produce the following goods?

(i) a clay pot

(ii) a wooden table

(iii) a cotton shirt

(iv) white bread

As students respond, write their answers under one of the three headings on the board: Land, Labour, Capital.

(b) Utilizing the list of examples under each heading, ask students to define each term.

(c) When students have a working definition of the factors of production, have them skim the article "Different Historical Views of the Industrial Revolution"

(Labour and capital in the textile industry.)

2. Pose the following question:

In addition to the factors of production, what else is required before an industry can develop?

(You may wish to use an example from "making bread" to show that, even though all the items of a recipe are available, you need someone to put them together. If we have land, labour and capital available, will industry develop automatically? Note also, the variety of options available in the recipe itself and the decision-making required.)

(a) Have students read p. 3-4 in The Growth of Industrialization. Tell them to think about the role Arkwright served in the textile industry.

(b) Optional:

Students should answer question 2 and 3 on page 4 of The Growth of Industrialization in their notebooks. Discuss their answers with them.

3. Have students construct a comparison chart after reading the articles: "The Impact of Industrialization on Economic Life" (p. 86-88), and "Why did the Factory System Develop?" in The Growth of Industrialization (p. 5-6).

Tell students:

Compare the changes from the "domestic system" to the "factory system", according to the factors of production and the role of the capitalist.

	Domestic	Factory
Land		
Labour		
Capital		
Role of Capitalist		
Values		

4. Optional:

Have students complete the following problems in their notebooks to extend their understanding of the role of the capitalist in industrial growth.

Problems for Capitalists to Solve:

(a) Suppose that you have a business in which you hire five men, to whom you pay $2 an hour. Suppose further that you have overhead costs of $100 a day and that you pay $1 in materials cost for each item that your business manufactures. (Overhead costs include such items as the cost of capital, depreciation, property taxes, etc.)

(i) Assuming that you keep all five men, what is your average cost per unit of output if your plant turns out 10 items per 8-hour day? 100 items? 1000?

(ii) What does this suggest about the way industries grow? What human value is evident here?

(b) Which is more economical, a plant with a payroll of $400 a week, with $100 of overhead a week, and with an output of 100 units per week or a plant with a payroll of $80,000 a week, the same overhead, and an output of 50,000 units per week? (Note that capital and raw materials have been excluded from the question to simplify the problem. What impact could they have on the comparison in an actual situation?)

EVALUATION

Collect students' comparison charts (p. 83) and check for accurate completion. If students have difficulty with one or more of the items, they may be having difficulty with one of the concepts. Teach again if necessary.

Award a total of 10 points (1 mark each for a good example placed in the correct column).

THE IMPACT OF INDUSTRIALIZATION ON ECONOMIC LIFE

The Domestic System of Manufacture. In 1750 most of the people in England grew their own food and made their own clothing. There was some organized manufacturing, but it was usually on a small scale. In many areas of western Europe the domestic system (or putting-out system) was used to manufacture goods. An employer, sometimes called a "merchant capitalist", provided the raw materials to the worker, collected the finished product, and sold it for profit.

Men, women and children laboured in their own homes. Some of them farmed the land in addition to turning out finished goods. Many others spent nearly all of their time in their cottages spinning, weaving or making things by hand.

This system of industrial production gave the workers a considerable degree of independence. They themselves determined how much time they would spend working during a day and how many days a week they would work. With their own gardens to supply food, they were not dependent on wages alone for their survival. And they took pride in their work as artisans, for the finished products which they turned out were well or poorly made according to the skill of the worker.

The Factory System Replaces the Domestic System. The Industrial Revolution gradually brought an end to the domestic system. New inventions and sources of power, particularly the development of large power-driven machinery, made it possible for the factory to take the place of the home in industry. The factory provided a place where machines could be arranged in the most efficient manner for production. The new inventions also created a need for a division of labour in the factory. Instead of having one person do all the tasks necessary to produce a finished product, work became specialized. One person did a single task over and over again, thus becoming quite expert at it.

The change was not a sudden break with the past. A simple factory system had existed at the same time that the domestic system flourished. Workers under the domestic system were already familiar with industrial labour. It was not too difficult for them to transfer their work to the new factory system. The difficult part was adjustment to the disciplined approach to work that machines made necessary.

Under the modern factory system, as it first developed, the factory, tools and materials were generally owned by capitalists, who hired the workers. Capital is

wealth used to produce additional wealth. Men who used their factories, tools and materials (or wealth) to turn out more goods are called capitalists.

After 1780, an increasing number of men, women and children left their rural or village homes to seek work in factories and mines. They came for many reasons: (1) Some had lost their farms by the enclosure movement or were no longer needed as farm labourers because of agricultural improvements. These unemployed persons wanted jobs. (2) Some were part of the labour surplus that resulted from the rapid increase in population. (3) Others were immigrants from Ireland who sought jobs in industry. (4) Still others, particularly children, were paupers who were forced to work in the factories. The factory towns developed into important industrial centres.

Adapted from: Roselle, Daniel and Anne P. Young. Our Western Heritage. p. 247-248.

LESSON 8

PURPOSE

To understand how a market economy operated in Eighteenth Century England.

OBJECTIVES

Knowledge

(a) Identify the basic characteristics of a market economy (free private enterprise).

(b) Explain relationships between competition in industry and scarcity of the factors of production.

MATERIALS

35 copies of "A Description of an Economic System" (p. 94 & 95).

LENGTH

1-2 periods.

PROCEDURE

1. Begin the class with a quick review of the factors of production and the role of the capitalist in stimulating production.

   Ask students:

   (a) What is the prime goal of the capitalist?

   (Discuss Arkwright as a case in point - make money, profits.)

   (b) Why is he interested in new machines?

   (Increase production, make more money).

2. Introduce a basic description of an economic system saying:

(a) Prior to the Industrial Revolution, the making, buying, and selling of goods was a fairly simple process and occupied only a small portion of the lives of individuals. The new technology altered society, however, and hastened the development of exchange in the economy. With the increase in economic activity resulting from mechanization, more and more people, either as labourers, capitalists, or landlords, became involved in the production and sale of goods. Interest in explaining this new human activity also grew.

(b) Distribute copies of "A Description of an Economic System" for reading.

(c) Have students answer the following questions related to the reading in their notebooks.

(i) Where did Smith get the idea of a "free private enterprise" economy? (first-hand observation).

(ii) What two general characteristics form the basis of the system? (growth, self-regulation).

(iii) Explain how each of the following contribute to industrial growth:
- division of labour (increases production)
- mechanization (increases production)
- savings (re-investment in industry)
- efficiency (sale of goods produced is greater than costs of production)

(iv) What impact does scarcity in each of the factors of production listed below have on industry and on society?
- labour (wages increase; possibly alternative means of production used; price of goods increased)
- raw materials (cost of raw materials increased; synthetics developed; industrial growth slow; price of goods increased)
- investment capital (industrial growth increased; limited variety of goods)

(v) How does competition regulate the economy, according to Smith? Use a common product such as hand soap or toothpaste to explain. (New and better products, lower price).

(vi) How do you feel about the system as described by Smith? (Comment on the value of industrial development to society and on the role of competition in regulating industry).

Optional Activity: (Needs and Wants)

If students have difficulty understanding how needs and wants have become inflated in industrialized society, ask them to list all the things they feel they need in order to be satisfied (happy). List as many of these items on the chalkboard as fast as they are given. Do not stop to comment on any item. When the chalkboard is filled (or until ideas are exhausted), ask students to identify the items they need to survive. Circle these. The remainder are "wants". Then, ask the students:

(a) Will there ever be a limit to the "wants" or demands of a Society?

(b) How can our resources continue to meet the demands of society?

Optional Activity: (Inputs and Outputs)

(a) Break the class into groups of 3 to 5 students. Assign or let each of the groups choose a product (e.g., oil, toothpaste, automobile, bicycle, etc.). On a sheet of paper make two columns headed "Inputs" (whatever is required to make the product) and "Outputs" (whatever is produced, including such things as pollution, employment, the product itself, etc.). When the lists are fairly complete,

attach a plus "+" or a minus "-" to each to indicate benefits to society and costs to society. Be prepared to report on how "productive" this industry is.

3. Assist the students in comparing systems. Present the following:

Because resources are scarce and people's wants and needs are unlimited, they must make economic choices. These choices revolve around three basic questions:

(a) What goods and services will be produced and in what quantities?

(b) How will goods and services be produced?

(c) For whom will goods and services be produced? The answers to these questions help describe the kind of system that society prefers.

(See chart and questions on the next page.)

EVALUATION

Check student completion of the reading (p. 94-99) and the questions on pages 90 and 91

1. What role has government taken in economic decision-making in these two economies?

	A Free, Private Enterprise Economy e.g. England, 18th & 19th Century	A Modified, Market Economy e.g. Canada, Today
WHAT?		(Food and drug laws) (Control over imports & exports) (Crown corporations) (Economic Council of Canada - Advisory) (Others?)
HOW?	(Health and Morals Act, 1802) (Factory Act, 1833) (Coal Mines Regulation Act of 1842)	(Laws against monopolies) (Labour Laws) (Wage and Price Controls) (Crown corporations) (Economic Council of Canada - Advisory) (Others?)
FOR WHOM?		(Food and Drug Laws) (Crown corporations) (Social assistance - family allowance - old age pension - welfare) (Economic Council of Canada - Advisory) (Others?)

2. How is a modified market economy different from a free private enterprise economy?

DESCRIPTION OF AN ECONOMIC SYSTEM

One of the earliest economists was Adam Smith, author of The Wealth of Nations, published in 1776. His book focuses on the problem of how a society of free private enterprise operates. His inquiry was based on his own observations about what was actually happening in England at this time, particularly in the "market place".

OBSERVATION 1: INDUSTRY HAS A TENDENCY TO GROW

Growth results from the increase in what each labourer in a factory is able to produce.

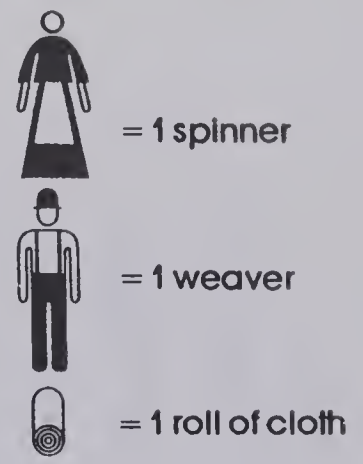
1. In his book, Smith describes how the division of labour in a pin factory increases production:

To take an example, therefore, from a very trifling manufacturer; but one in which the division of labour has been very often taken notice of, the trade of the pinmaker; a workman not educated to this business . . . could scarce perhaps, with his utmost industry, make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches . . . One man draws out the wire, another straights it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations;

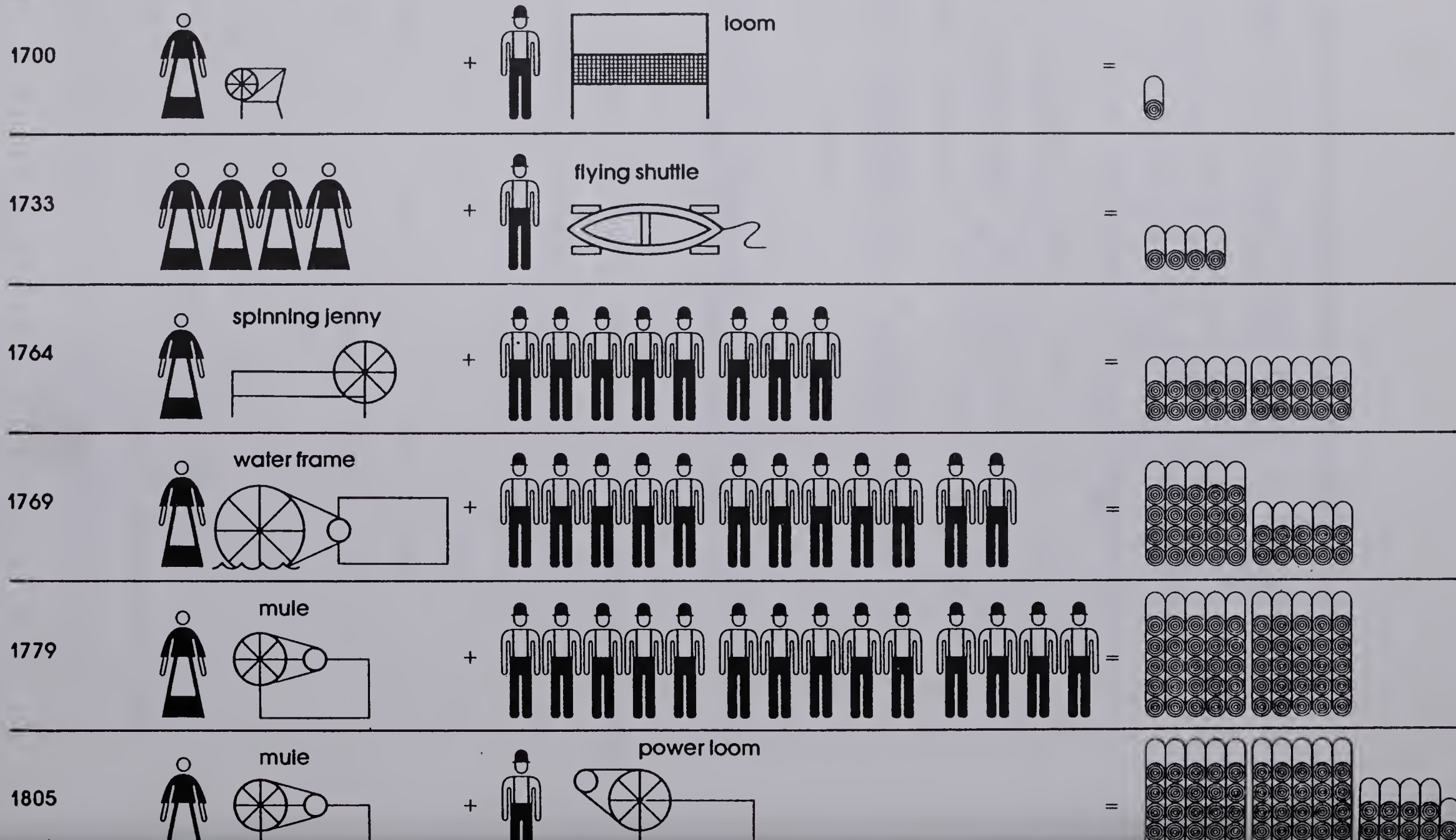
to put it on is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations. I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor (workers) . . . they could when they exerted themselves, make among them . . . upwards of forty-eight thousand pins in a day.

Copyrights: Smith, Adam. An Inquiry into the Nature and Causes of Wealth of Nations (p. 4-5)

2. Productivity is further increased by the use of machines. The capitalist purchases equipment which, although it may replace labourers, results in more goods for sale and higher profits. (See chart below.)



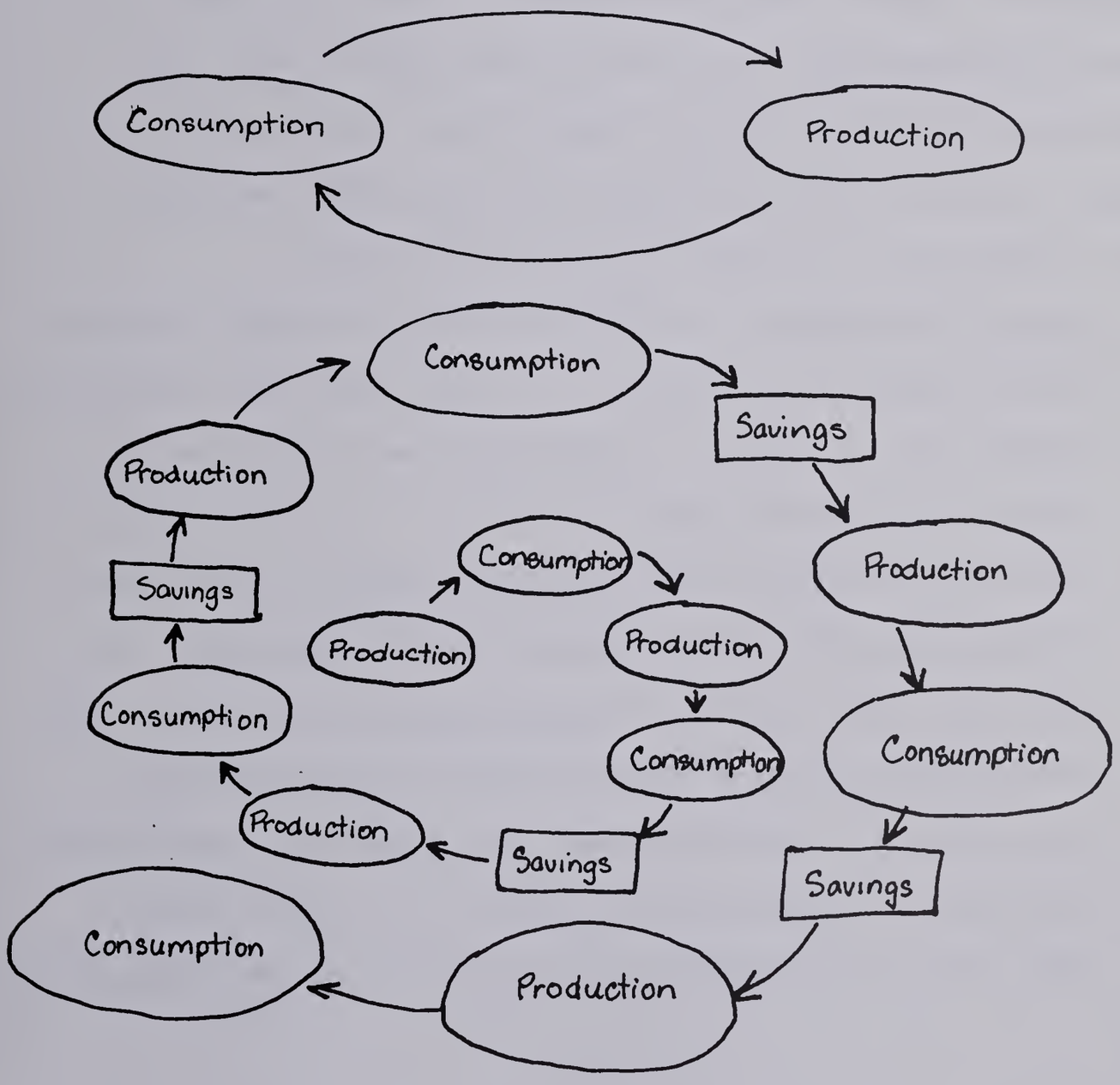
NEW MACHINES AND THE MAKING OF CLOTH



Schultz, Mindella. Inquiring About Technology.

3. Profits are essential to industrial growth. In order for the capitalist to invest his savings in industry, (e.g., by installing machines), he must get more money out of the factory than he puts in. See diagram following:

SAVINGS AND ECONOMIC GROWTH



Efficiency in the operation of the system (i.e., an industry has all the qualities listed previously) results in profits. The capitalist (if he invests his profits wisely) helps the system grow, creating even more profits.

OBSERVATION 2: COMPETITION REGULATES THE MARKET

Business operates best when governments do not attempt to control the market place. This attitude, called laissez-faire, is based on the belief that the problem of scarcity (lack of sufficient resources to supply society with everything its individual members want or desire) is solved through competition.

1. Competition prevents businesses from charging consumers whatever price they please. In the same way a labourer's demands for increases in wages may be controlled by competition for his job.
2. In order to attract the consumer's dollar, businesses develop new and better products which would sell at lower and lower prices. Laissez-faire means every man for himself, without restriction by the government. By seeking his self-interest, the greatest common good for mankind automatically results. In other words, human affairs in business and industry is best described

as a natural process which should not be tampered with by legislation and other forms of governmental interference. The market is the best alternative to state (government) intervention in determining how resources will be used and for whom.

LESSON 9

PURPOSE

To assist students in understanding the impact of industrialization on a society during the early stages of the Industrial Revolution.

OBJECTIVES

1. Value

   (a) Identify values underlying different points of view on the effects of industrial growth.

   (b) Make a personal list of factors which contribute to a life of "good" quality.

2. Knowledge

   Use examples from history to show that industrialization has a great impact on society.

3. Skill

   (a) Describe the issue in terms of the key concept: quality of life.

   (b) Compare points of view on the economic and social effects of the Industrial Revolution.

   (c) Support ideas logically in defending a position on the impact of industrial growth on quality of life.

MATERIALS

1. 35 copies - worksheets - "A Personal Ledger on the Effects of Industrialization", (p. 111).

2. 35 copies - values worksheets - "Industrial Revolution - Beneficial or Harmful", (p. 112).
3. 35 copies - group worksheets, (p. 113).
4. Paul Mennil - "The Depression Years": Canada in the 1930's, Canadian Scrapbook Series, Prentice-Hall of Canada. 1978. (Optional)
5. Cruxton, J.B. and D. Wilson. Flashback Canada. Oxford University Press, 1978. (Optional)
6. Dickens, Charles. Oliver Twist. (Optional)
7. Dickens, Charles. Hard Times. (Optional)
8. Sets of materials for each of the following:
   (a) Station One - More Consumer Goods (p. 114)
   (b) Station Two - Changes in Working Conditions and Working Attitudes (p. 121)
   (c) Station Three - Use of Child Labour (p. 129)
   (d) Station Four - Growth of Cities (p. 136)
   (e) Station Five - Rise of Unions (p. 146)

LENGTH

8 periods.

PROCEDURE

1. Introduce this lesson by asking:
   (a) What do you remember about the nature of free enterprise from the last lesson? (Listen for characteristics.)
   (b) What would you say is the main goal of such an economic

system? (Increase production of goods; increase profit; promote growth in industry; higher consumption.)

(c) The Industrial Revolution was especially noted for its rapid industrial growth, as well as for having a tremendous impact on the way people lived during the Eighteenth and Nineteenth Centuries and the way we live today. The question we will focus on is as follows: "What impact did industrialization have on society?"

2. Tell students: To answer this question, you will have to research, in small groups, each of the major effects of the revolution.

(a) Then, list the five major areas of inquiry on the chalkboard:

(i) More consumer goods (STATION ONE)

(ii) Changes in working conditions and worker attitudes (STATION TWO)

(iii) Use of child labour (STATION THREE)

(iv) Growth of cities (STATION FOUR)

(v) Rise of unions (STATION FIVE)

(b) Information and questions on each "effect" can be posted on the wall at different places in the room. Brown envelopes (8½" x 11") make an excellent pocket for the multiple copies of the articles at each station. (You may wish to create a learning centre around each topic complete with pictures, books, articles, activities, etc., to extend this portion of the unit).

(c) Break the class up into 5 groups and assign each group to a particular station. You may wish to move the groups in lock-step fashion, or allow students to work at their own speed. At any rate, all students must have completed all 5 stations by a specified date. Four full periods (45 minutes) should be ample for completing the minumum tasks required, after which you might like to collect the students' written work.

3. Distribute copies of "A Personal Ledger on Industrialization" or have students draw their own in their note books. This ledger is intended to help students organize and analyze information about industrialization outcomes. Each entry should be based on the research completed earlier. You may wish to complete one entry with the class as an example using one of the articles at a station. (See completed sample, p. 104)

A PERSONAL LEDGER ON INDUSTRIALIZATION

(Teacher's Sample)

IMPACT OF SOCIETY	COST/BENEFIT	PERSONAL CRITERIA
e.g. Growth of cities creation of slums	cost	inhuman conditions
poor sanitation	cost	threat to health
over-crowding	cost	threat to health & happiness
living accomodations close to industry	benefit	employment; regular income
others (?)		others (?)
e.g. Child labour employment for young children	benefit cost	regular income for families loss of play time difficult work; threat to health

Tell students that their "ledgers" will be collected as well as their answers to the questions after each of the five major groups of readings.

4. When most students have completed their ledgers, introduce them to the next phase which involves defining "quality of life" and arriving at group consensus regarding the impact of industrial growth on society.

Begin by asking students:

(a) What do you consider to be a "good" quality of life.

(Accept all ideas. It may be helpful to have a recorder in the class, or you may jot their ideas on the board).

(b) Expand students understanding of quality of life by introducing "per capita income". Say: One measure of a "good" quality of life may be how well the members of society's needs and wants are met. This can be determined by finding out the per capita income - i.e., a society's total income divided by its total population. A society's total income is the total value, in money, of all the goods and services produced by its members. (Total income is also called gross national product, or GNP.

Is this a good way to determine quality of life?

Why? Why not? How well does it represent reality for individuals?

(c) Optional: (extends understanding of per capita income)

How much do students know about GNP? What does it measure? Not measure? Put the following figures on the chalkboard and ask students the following questions:

	GNP (in millions)	Per Capita Income	Population (in millions)
SOCIETY A:	$500	?	12
SOCIETY B:	$9,500	?	25
SOCIETY C:	$1,000	?	3
SOCIETY D:	$150,000	?	100

(i) Which society is best able to satisfy its members' wants and needs?

(ii) Does the society with the highest per capita income have the highest quality of life? How do you know?

Then ask the following:

(iii) What aspects of life cannot be measured in terms of wealth?
Listen for these examples:

- personal satisfaction; job satisfaction
- humane treatment of others
- interpersonal relations (family ties, friends etc.)
- achievement of ultimate life goals such as happiness, freedom, self-respect, love
- other (?)

(d) Using information from your research, how do you think the following groups in society viewed "quality of life"? Why do you think so?

(i) eighteenth/nineteenth century capitalists

(ii) workers (factory, mines, etc.)

(iii) union leaders

(iv) government

(v) others (?)

(e) Optional: (extends understanding of quality of life)

You may wish to demonstrate polar positions regarding beliefs of what a life of "good" quality is to help students with their understanding. Few people in society actually hold a polar position. Also, however, some polar positions may not appear mutually exclusive, depending on a person's perspective.

Materialism	Achievement of life goals
(excessive interest in owning material goods; profits/wealth)	(sole interest in happiness, freedom, personal satisfaction, love of family and friends)

Have students complete the following "Rating Scale".

RATING SCALE

Place an X where you think each group's ideas about quality of life seemed to belong during the early stages of the Industrial Revolution.

GROUPS IN SOCIETY	MATERIALISM LIFE GOALS
Capitalists	
Workers	
Union	
Conservative Government	
Liberal Government	
Others (?)	

(f) How would these groups regard the five effects of the Industrial Revolution? (Have students complete worksheet, "Industrial Revolution - Beneficial or Harmful", and then discuss students' interpretations. Ensure that students are able to understand the following:

(i) that group reactions to forces in society indicate something about what they value

(ii) that our assessment today, although we can support it with evidence, will not be as accurate as if we were there

(g) Ask: How important are these to you in describing a good quality of life:

(i) emphasis on material wealth?

(ii) emphasis on "achievement of life goals?"

(h) Have students write a personal definition for "good quality of life" in their notebooks in preparation for the group activity.

5. Break the class into groups of 3 - 5 students. Ensure that each group has a mix of low and high ability students. Provide them with the group worksheet (p.113). Assign the following:

(a) Prepare a written defence for your group's position regarding the statement:

INDUSTRIALIZATION LEADS TO A BETTER QUALITY OF LIFE OVERALL

(b) In order to accomplish this task you will need to do the following:

(i) decide who will be group leader, recorder and spokesman and what specific duties these roles entail

(ii) arrive at consensus regarding a definition of a "good" quality of life

(iii) examine each others personal ledgers re: the impact of industrial growth on society

(iv) agree on a position

(v) list arguments to support that position (five main points with examples and illustrations for each point)

(vi) prepare a good copy of your group's position, list at least two problems created by industrialization

(vii) prepare a good copy of your group's work and be ready to present the group's deliberations to the total class

List these on the chalkboard.

6. Hold a total class discussion where each group presents their conclusions to the class. Encourage students to question and to criticize ideas presented.

7. Ask students to record ideas about the following in their notebooks:

   (a) quality of life (definition and some indicators of a "good" quality)

   (b) relationships between industrial development and quality of life

   (c) evidence supporting the beneficial impact of industrialization

   (d) evidence indicating some harmful effects of industrialization

   You may wish to assist them in this task by recording ideas on the chalkboard as they are given in class.

NOTE: The list of problems created by industrialization should be recorded on a large piece of paper and posted on the wall.

8. Remind students of the social issue: Should we limit industrial growth? Ask them: "What have you learned about the issue? What do we still need to know in order to resolve it?"

EVALUATION

1. Check completion of the 5 stations.
2. Evaluate each student's "Personal" Ledger on the Effects of Industrialization accordingly:
   (a) Each Impact - 3 points in all
   (2 points for accurate identification of impact and 1 point for consistency between cost/benefit assessment and personal criteria)
   (b) Total possible - 15 points
3. Award 15 marks to each group according to the following:
   (a) Group Mechanics (10)
      (i) ability to determine group roles and responsibilities efficiently
      (ii) ability to arrive at consensus
      (iii) ability to agree on a position
      (iv) ability to complete the group worksheet
      (v) ability to present group decisions
   (b) Content of Group Work (5)
      (i) consistency of arguments with position
      (ii) quality of arguments and problems

WORKSHEET

A PERSONAL LEDGER ON THE EFFECTS OF INDUSTRIALIZATION

(FIRST STAGE OF THE REVOLUTION)

IMPACT ON SOCIETY	COST/ BENEFIT	PERSONAL CRITERIA

VALUES WORKSHEET

Industrial Revolution - Beneficial or Harmful?

How would each of these groups in society regard the five effects of the Industrial Revolution?

Instructions for Chart

Place a "+" or "-" to indicate whether the group regarded the effect as mainly "beneficial" or mainly "harmful". If you think the group felt that the effect was both, indicate as "+/-". Be prepared to defend your chart with evidence about what each group values.

	more consumer goods	working conditions/ attitudes	use of child labour	growth of cities	rise of unions
Capitalists					
Factory workers					
Craftsmen					
Miners					
Union leaders					
Conservatives in government					
Liberals in government					
Families					
Others (?)					
_____					

GROUP WORKSHEET

1. Group members: _____group leader

_____recorder

_____spokesman

_____

_____

2. Our definition of a "good" quality of life:

_____

_____

3. Our position regarding the statement:

Industrialization leads to a better quality of life overall

_____

_____

4. Our main arguments:

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

5. Problems created by industrialization:

(a)_____

(b)_____

STATION ONE

More Consumer Goods

1. Wage increases for British Workers (compulsory)
   (a) Read p. 43 - 44 in The Growth of Industrialization entitled, "How much has the British standard of living risen?"
   (b) Answer the questions on p. 44 under "interpreting the graph". Do all three questions except for the second part of number 1.
2. Two viewpoints on the Material Benefits of Industrialization (compulsory)
   (a) Read both of the articles: "Higher Wages, Cheaper Goods", and "The Home Life of the Labourer" (p. 116 & 118) for two different viewpoints.
   (b) Answer the following:
      (i) Whose viewpoints are presented here?
      (ii) What do each appear to value most?
      (iii) How do you account for the differences?
      (iv) Which article presents a more accurate picture of the availability of consumer goods and the benefits derived from them? Why do you think so?
      (v) What can you infer about what this family considers important to them?
3. After completing activities 1 and 2 above, ask your teacher or another student to read your written work and discuss it with you. To indicate that you have

completed this requirement, ask this person to jot down several comments - either suggestions for improving answers or strong points evident in it - his/her signature.

DO NOT PROCEED TO THE NEXT STATION UNTIL THIS HAS BEEN COMPLETED.

4. Availability of Consumer Goods in Canada (optional)

Read p. 16 & 17 in "The Depression Years": Canada in the 1930's.

(i) What evidence is there to support the argument that Canadians in the 1930's benefitted from industrialization?

(ii) How available were these goods to all Canadians?

(iii) On page 3 of this book, evidence is presented which shows that some Canadians did not enjoy material wealth at all. How do you account for this?

HIGHER WAGES, CHEAPER GOODS

In this selection, Edward Baines sums up his view of the state of factory wages in the mid-1830's. Baines assumes here that both adults and children in a family were employed, and that employment was steady.

(The evidence) establishes beyond all doubt that the.... work-people employed in the cotton mills of Great Britain receive wages sufficient to provide them not just the necessities of life in food, clothing and shelter, but also many comforts and some luxuries to enable the adult workmen, with (careful saving) to educate their children, and to provide against sickness and old age, and to enable children to contribute materially to the support of needy parents. Where a spinner is assisted by his own children in the mill, as is very frequently the case, his income is so large that he can live more generously, and clothe himself and his family better, than many of the lower class of tradesmen. There are thousands of spinners in the cotton districts who eat meat every day, wear broadcloth on Sunday, dress their wives and children well, furnish their houses with mahogany and carpets, subscribe to publications, and pass through life with much of humble respectability.

Thus the humblest classes have now the means of as great neatness, and even gaiety of dress as the middle and upper classes of the last age. A country wake in the nineteenth century may display as much finery as a drawing-room of the eighteenth; and the peasant's cottage may, at this day, with good management have as handsome furniture for beds, windows, and tables, as the house of a substantial tradesman sixty years ago.

Copyright: Baines, Edward - History of the Cotton Manufacture in Great Britain. p. 358, 446

THE HOME LIFE OF A LABOURER, 1833

Most modern historians would agree that wages for factory work at the time were better than for many other occupations, and that during the first half of the nineteenth century, there was a rise in the real income of many workers. But how well did factory workers live even during good times? The following account, written by one of the government appointed factory commissioners, indicates the way one family spent its earnings in the early 1830s. In this case, the father and one child, but not the mother, worked in a cotton mill. The wages they earned were the family's only source of support and were fairly typical of wages paid for adult and child labour in the mills.

Mrs. B. Manchester. This witness was accidentally met with. She was waiting for Dr. Hawkins to consult him about her niece's health. I took her into a room and examined her about the customs and comforts of factory-employed families....

Her husband is a fine spinner, at Mr._____'s, where he has been from 1816; has five children. Her eldest daughter, now going on 14, has been her father's piecer for three years. At present her husband's earnings and her daughter's together amount to about 25s a week.

Breakfast is generally porridge, bread and milk, lined with flour or oatmeal. On Sunday, a cup of tea and bread, and butter. Dinner, on week days, potatoes and bacon, and bread, which is generally white. On a Sunday, a little flesh meat; no butter, egg, or pudding. Teatime every day, tea, and bread and butter; nothing extra on Sunday at tea. Supper, oatmeal porridge and milk; sometimes potatoes and milk. Sunday, sometimes a little bread and cheese for supper, never have this on weekdays. Now and then buys eggs when they are as low as a halfpenny apiece, and fries them to bacon.

Consumption by the Week, of different Articles, by her Husband, herself and five children.

	£	s	d
Butter, 1½ lb. at 10d		1	3
Tea, 1½ oz.			4½
Bread she makes herself; buys 24 lb. flour, barm, salt, and baking		4	6
Half a peck of oatmeal			6½
Bacon, 1½ lb.			9
Potatoes, two score a week, at 8d/s		1	4
Milk, a quart a day, at 3d a quart		1	9
Flesh meat on Sunday, about a pound			7
Sugar, 1½ lb. a week at 6d per pound			9
Pepper, mustard, salt and extras, say			3
Soap and Candles		1	0
Coals		1	6
Rent of house, per week		3	6
		18	1
Alleged Total of weekly income	1	5	0
Deduct foregoing expenses		18	1
Leaves for clothing, sickness of seven persons, schooling, etc., a surplus of		6	11

They never taste any other vegetable than potatoes; never use any beef or spirits; now and then may take a gill (quarter-pint) of beer when ill, which cost a penny. Perhaps she and her husband have two gills a week.

The house consists of four rooms, two on each floor; the furniture consists of two beds in the same room, one for themselves and the other for the children; have four chairs, one table in the house, boxes to put clothes in, no chest of drawers, two pans and a tea-kettle for boiling, a gridiron and frying pan, half-a-dozen large and small plates, four pairs of knives and forks, several pewter spoons.

They subscribe a penny a week for each child to a funeral society for children.

Two of the children go to school at 3d a week each; they are taught reading for this but not writing. Have a few books, such as a Bible, hymn book, and several small books that the children have got as prizes at Sunday School.

Parliamentary Papers; Factories Inquiry Commission: First Report on the Employment of Children in Factories. Irish University Press Series, The Industrial Revolution. (1968) Vol. 3, p. 29 - 40

STATION TWO

Changes in Working Conditions and Worker Attitudes

1. Eighteenth and Nineteenth Century Great Britain (compulsory)

   (a) Read p. 21-24 in The Growth of Industrialization, the section Entitled: "What did parliament discover?" describes four different situations in Great Britain during the early stages of the Industrial Revolution.

   (b) Answer the questions on page 24 of The Growth of Industrialization in your notebooks.

2. Nineteenth Century Canada (compulsory)

   (a) Read the article "Hard Labour" (p. 123) OR pages 130-133 in Flashback Canada, entitled "Conditions of Work".

   (b) Using the information in the reading you chose, answer the following:

      (i) What specific examples can you find which show that the worker was treated unfairly by the employer?

      (ii) What specific benefits did the worker receive despite difficult working conditions?

      (iii) Many workers, and especially the owners of industry believed in the work ethic; i.e., "Hard work is good for a person." In what ways did this belief contribute to industrial growth?

      (iv) Why do you think workers allowed their employers to treat them the way they did?

3. After completing activities 1 & 2 ask your teacher or another student to read your written work and discuss it with you. To indicate that you have completed this requirement, ask this person to jot down several comments - either suggestions for improving answers or strong points evident in it - and their signature.

DO NOT PROCEED TO THE NEXT STATION UNTIL THIS HAS BEEN COMPLETED

4. Nineteenth Century United States (optional)

(complete if time allows)

(a) Read the article: "Machines of Almost Superhuman Ingenuity" (easy reading)

OR

"The American Working Man and Mechanization" (difficult reading)

(b) Answer the following questions:

(i) Whose point of view is favoured in this article; unskilled worker, craftsman, or capitalist?

(ii) According to this article, what is industrialization based upon?

(iii) What is the workers attitude expressed here? What do you think of it?

HARD LABOUR

In the second half of the 19th century, working conditions in Canada were terrible.

Increasing industrialization provided jobs in factories, but it also led to the exploitation of workers. Children as young as eight worked around dangerous machinery from six in the morning to six at night. Many factories hired mainly women and children because they could pay less money. Typical pay in textile factories was 25 cents a day for children and 75 cents a day for women; a man might expect to make $7.75 for a 59 hour week. Men often worked 35 hours at a stretch in New Brunswick's shipping industry.

In some factories, fines were imposed for poor quality work. Often this left the employee owing money to the employer after working a 50 hour week. Beatings of employees were common. In 1889, a Royal Commission revealed many horror stories. A cigar manufacturer in Montreal imprisoned apprentices in a "black hole" for hours at a time, even after the work day was over. A special constable was maintained to frighten the young workers.

Many poor, uneducated immigrants were exploited by landowners, railway and factory owners. An example are the Chinese coolies who were hired for $1.00 a day to work on the building of the railways in the West. A condition of employment was that they shop at company stores for their necessities, where prices of course, were higher. They were paid only 80 cents if they shopped elsewhere.

Copyright: Sevitt, Carol. Canada and the World. Vol. 44, No. 3, p. 12.

MACHINES OF ALMOST SUPERHUMAN INGENUITY

(Easy Reading)

The first effect of the introduction of labour-saving machinery is the loss of pride in labour. When labour is divided up, a man is no longer a tradesman. He is a part of a tradesman. In my trade of shoemaking, twenty years ago the work was done almost entirely by hand, and the man had to learn how to make a shoe. Now, with the use of machines a man is only a sixty-fourth part of a shoemaker, because there are sixty-four subdivisions in making shoes. A man may work forty years at our trade, and at the end of forty years he will know no more about making a whole shoe than when he began.

You cannot turn back the hands upon the dial of human progress and say that all machinery must be banished. You would not take up the rails, destroy the train, and break up the railroad cars, and go back to the stage coaches and horses. You would not tear down the telegraph poles, break up telegraph instruments, and destroy the cables that run under the ocean. Yet, while these improvements benefit mankind their first result is the demeaning of labour by the subdivision of labour.

The consumer gets some advantages indirectly. I admit that the shoe which formerly cost $7 can now be bought at $3, but one shoe of former times would outwear two pairs of shoes now; so that it is pretty nearly the same.

Copyright: Yellowitz, Irwin, The Position of the Worker in American Society 1865 - 1896. p. 88 - 89.

THE AMERICAN WORKING MAN AND MECHANIZATION

(Difficult Reading)

A special committee was appointed by the American Social Science Association in 1878 to investigate the impact of mechanization on man. This committee concluded that machinery had broken up and destroyed the American system of individual and independent action in the production of goods. At one time any man who possessed a trade by his own hands could easily make that trade support his family and provide a means of advancement into a higher social class. He was free from control by any other man.

Now, the increasing use of machinery in industry has made it possible for an individual to work by himself for his own good. Men and women are forced into a system where they must work in groups of hundreds and thousands and where there is no interest in their work other than wages. The worker has no voice, no right, no interest in the product of his hands and brains. Instead, he is subjected to the uncontrolled interests and whims of the entrepreneur who often has no other motive than greed.

Although the findings of this committee are somewhat harsh regarding the entrepreneur and overstated in so far as the dehumanization of the worker, this stage of the Industrial Revolution saw the decline of the craftsman, or skilled worker. Industrialization was based upon the use of machines in factories, with the centralization of labour supply, the increase in the volume of production, and the reduction of cost. The increasing use of machinery made the small shop, based upon the quality of the craftsmanship, less viable, and instead the entrepreneur required large amounts of capital to buy new equipment and to build factories. The craftsman often saw his part in production become less valuable as mechanical processes broke a complicated production into many simple tasks easily handled by unskilled workers. As production depended less and less on the skill and knowledge of the craftsman, it became dependent more and more on the capital and managerial talent of the entrepreneur.

Copyright: Yellowitz, Irwin, The Position of the Worker in American Society 1865 - 1896. p. 28.

STATION THREE
USE OF CHILD LABOUR

1. Eighteenth and Nineteenth Century Great Britain (compulsory)

   (a) Read p. 24 - 28 in "The Growth of Industrialization". This section, entitled "What did Parliament learn about Child Labour?" describes the bad conditions under which children worked in British factories and coal mines during the early stage of Industrial Revolution.

   (b) Answer question 1 and 2 only on p. 29.

2. Comparing Different Points of View (compulsory)

   (a) Read the article, "Child Labour in the Textile Industry in England - Different Views", first from the point of view of the child worker and then, from the point of view of the owners of the mills. (See p. 132.)

   (b) Construct a chart to show how the child worker's views might differ from that of the owners.

   List items from the articles under "costs and benefits" according to how you think they would be viewed.

e.g.

	Child Workers		Owners	
	cost	benefit	cost	benefit
Case Study 1				
Case Study 2				
Case Study 3				

(c) What can we infer about what the child workers valued? The owners valued?

(d) What alternatives do you think the child had if he did not wish to work in the mill? Why didn't he take one of those alternatives?

3. After completing activities 1 and 2, ask your teacher or another student to read your written work and discuss it with you. To indicate that you have completed this requirement, ask this person to jot down several comments - either suggestions for improving answers or strong points evident in it - and their signature.

DO NOT PROCEED TO THE NEXT STATION UNTIL THIS HAS BEEN COMPLETED.

4. Nineteenth Century Canada (optional)

(a) Read p. 135 -137 Flashback Canada, entitled "Child Labour".

(b) In what ways was "child labour" in Canada similar to child labour in England. How do you account for that?

5. Novels (optional)

Charles Dickens wrote many novels about Industrial Britain. Two in particular, Oliver Twist and Hard Times focus on the impact of the Industrial Revolution on children. Read one in your spare time. This will help you develop a good insight into English society during the revolution and you will be entertained at the same time.

CHILD LABOUR IN THE TEXTILE INDUSTRY IN ENGLAND - DIFFERENT VIEWS

INTRODUCTION

Once the water frame had been invented by Richard Arkwright in 1769 it was only a matter of time before workers were gathered together in a "factory" to produce goods. Water frames required little strength or skill to operate so even a young child could "mind" the machine. Many factories were built in areas where few people lived, areas where water power was available.

Hot, airless factories were built and machines seldom stopped during the day. A working day was usually 12 hours and minding the machines was boring. Since children could crawl under the machines and sweep the fluff from the floor and change the full bobbins for empty ones, they were suitable for working in these mills. Young children's tiny fingers could do this swiftly.

Children were available from distant rural districts. Often, they were orphans, motherless or fatherless, or without relatives to support them. Many were in workhouses or in homes supported by craftsmen; they could expect only work as a servant or a farm labourer when they were older. It was these children

who were put into factories. Sometimes they were treated well according to the standards of the day, but sometimes they were treated brutally, resulting in death or serious bodily harm. However, it was believed by many people that the opportunity to be a mill apprentice was better for the child than life in a workhouse.

CASE STUDY 1

This factory was built near a river. The closest village was two miles away, so nearly all the labour force would have to be brought in. There was a fairly good road to Manchester.

The owner built a house for the mill manager and a three-storied apprentice house for the mill children. On top of the mill itself, there was a bell which called the children to work. The woods around the mill were full of wild flowers and the children were allowed to play there when not at work. The hours of work were 5:30 a.m. until 8 p.m. with 30 minutes for breakfast and supper and one hour for dinner, 12½ hours a day for six days a week. On Sunday, the children were taken to church. They had been given an outfit of clothes for Sundays. They had another outfit to wear to work. The food was ample and a doctor was available. As the mill grew larger and more children were brought in,

a school was built and teacher paid to teach the children who were allowed time off in the evenings to attend the school.

By the early 19th century children were seldom brought from districts more than thirty miles away.

While the owner of this factory was kind to his workers, he saw no reason why the government should pass laws to make employers treat their workers well. He believed this would be an interference with personal liberty. He bitterly resented any suggestion that conditions in mills should be under any kind of public control. He went to London to persuade members of parliament that they should not pass a law restricting the hours of work for apprenticed children. There he met other mill owners who were also kind to their child workers, but they fought long and hard for the passing of laws which would control working hours and working conditions. Two of these were John Fielden and Robert Owen.

CASE STUDY II

This factory was also built on a river. It was so isolated that child workers were brought from London, 300 miles away. Some were only seven years old. All were bound apprentices until 21 years of age. Working

hours were 5 a.m. to 8 p.m. with one hour off for dinner, with a six-day week. Other food was eaten at their work. Sunday morning they cleaned the machines. At times there was more work and the hours were from 5 a.m. to 9 p.m. for as much as three continuous weeks. The children slept on the floor with a rough, unwashed blanket for cover. They could not go off the premises.

The owner thought that the loss of freedom was good for the children as it kept them out of mischief.

The atmosphere in the mill was very close. Fluff from the cotton was in the air and the children were given emetics so they would vomit it back.

The owner did not want any government laws restricting child labour, but even if they did pass them he was confident they couldn't enforce them anyway.

CASE STUDY III

In addition to apprentice children from poor homes, there were also free-labour children. These children came from homes near factories. By 1830, factories now using steam, were located in populated areas. About 56,000 children under 13 years of age and 108,000 age 13 - 18 were working. Their pay was needed to supplement the family income.

While public opinion was against any control of working conditions for adults, there was a growing concern to protect "free-labour" children.

STATION FOUR

GROWTH OF CITIES

1. Nineteenth Century Great Britain (compulsory)

   (a) Read p. 29-31 in The Growth of Industrialization. The section entitled, "How did workers live in the industrial slums?" describes living conditions in the "factory city".

   (b) Answer the following questions:

      (i) Make a list of descriptive phrases which illustrate what living conditions were like.

      (ii) Between 1801 and 1831 (30 years), some of the larger industrial cities like Manchester, Glasgow, Liverpool and Leeds, doubled in size; while at the same time, Britain's total population had increased by only half. How do you account for such an increase in the cities?

2. Comparing A Cottage District with A Factory District (compulsory)

   (a) Read the article, "A Cottage District" (p. 138) as described by a traveller in 1724 (before the Industrial Revolution) and then compare it to a description of Manchester by another traveller some 120 years later, entitled "A Factory District" (p. 140).

   (b) Answer the following questions:

      (i) What major differences can you find between the two districts?

(ii) What attitudes do the two writers have toward the "districts" they have described?

(iii) What does this indicate about what they value?

3. After completing activities 1 & 2 ask your teacher or another student to read your written work and discuss it with you. To indicate that you have completed this requirement, ask this person to jot down several comments, either suggestions for improving answers or strong points evident in it, and their signature.

DO NOT PROCEED TO THE NEXT STATION UNTIL THIS HAS BEEN COMPLETED.

4. Another point of view (optional)

(a) Read the article "Another Point of View of Urban Growth", (p. 144).

(b) Answer these questions:

(i) What is this author's point of view regarding the condition of urban living?

(ii) Why do you suppose he has taken this viewpoint?

(iii) What can we infer about what he values or considers important in life?

A COTTAGE DISTRICT

Daniel Defoe is the author of Robinson Crusoe. He toured England in 1724. Later, he wrote about his travels. Here is his description of a cottage district in northern England:

From Blackstone Edge to Halifax is eight miles; and all the way is up hill and down.

The nearer we came to Halifax, we found the houses thicker, and the villages greater in every valley. The sides of the hills, which were very steep, were spread with houses.

In short, after we had mounted the third hill we found the country one continuous village. Hardly a house stood out of a speaking distance from another. As the day cleared up, we could see at every house a frame, and on almost every frame a piece of cloth, kersie, or shalloon; which are the three items of this country's labour.

We found at every house a little gutter of running water. If the house was above the road, it came from it, and crossed the way to run to another. If the house was below us, it crossed us from some other distant house above it. These little streams were so guided by gutters or pipes, that every house had one.

After using this water, the houses released it filled with dye, soap, oil, and other things used in the making of cloth. The lands through which it passes are enriched by it.

Every clothier must keep one horse, at least, to fetch home his wool and his goods from the market, to carry his yarn to the spinners, his cloth to the mill, and when finished, to the market to be sold. Everyone also keeps a cow or two for his family.

We saw houses full of workers, some at the dye-vat, some at the loom; the women and children carding or spinning. All were employed from the youngest to the oldest.

Copyright: Schultz, Mindella, Inquiring About Technology, p. 54 - 56.

A FACTORY DISTRICT

A German Visitor in 1844, J.G. Kohl, described Manchester in the following way:

I know of no town in Great Britain, except London, which makes so deep an impression upon the stranger as Manchester. London is alone of its kind, and so is Manchester. Never since the world began, was there a town like it, in its outward appearance, its wonderful activity, its mercantile and manufacturing prosperity.

It cannot be said that Manchester is either an ugly or a beautiful town, for it is both at once. Some quarters are dirty, mean, ugly and miserable looking to an extreme; others are interesting, peculiar, and beautiful in the highest degree.

Let us take a short walk together through these various scenes. We set out from the broad, stately and imposing Market Street which runs through the heart of the town. This street is always busy, noisy and interesting, and contains numbers of splendid shops, and street lamps make it almost painfully dazzling to eyes not yet accustomed to these nightly illuminations of the great English cities.

Let us now turn into one of the by-streets which diverge from Market street. Here stand the great warehouses, five or six stories high, all large and imposing, some of them stately and elegant. At night these warehouses are all brilliantly lighted from top to bottom. On the ground floor are the counting-houses, where the merchants and clerks are busy all day long.

From the streets of the warehouses, we pass on to the banks of the rivers which run through the city. Here the scene varies. The rivers are intersected by an immense number of large and small bridges, in every form and direction. Standing upon one of these bridges, let us look around us a little. What an extraordinary spectacle! There stand rows and groups of huge factories. See how eagerly these manufactories suck up, through pumps and buckets, the river water which dirty as it is, is invaluable to them, and which they pour back into the river, in black, brown, and yellow currents, after it has served their purposes. The river pours on its thick muddy current through the streets of the city to satisfy other thirsty manufactories further on. The blue heavens above are hidden from us by the thick smoke of the huge factory chimneys which weave a close impenetrable veil of brown fog between the city and the sky.

The great establishments are built in various ways; some piled story on story; others on the straight line system, in long successive rows; others like huge greenhouses, all on one floor, lighted from the top. From these huge and oddly shaped buildings rise immense chimneys of all heights and diameters, and sometimes architecturally ornamented with stone garlands, bas-reliefs, and pedestals. Just as, in former times, the huts of the vassals surrounded the castles of their lords; so now, in the neighbourhood of the great manufactories, are seen the dwelling-places of the work-people, mean-looking little buildings, huddled together in rows and clusters. These quarters are the most melancholy and disagreeable parts of the town, squalid, filthy and miserable, to a deplorable degree. Here stand the abominable beer-houses, dramshops, and gin palaces, which are never without customers. Here the streets are filled with ragged women and naked children. Whole rows of houses stand empty, while the remainder are overcrowded; for in some places the inmates have been expelled by the owners for non-payment of rent, while in others they have voluntarily given up their dwelling in order to live cheaper, by sharing that of another family.

Through these poorer quarters pass many broad, splendid streets, which lead out through the suburbs to Victoria Park, and other more fashionable vicinities, where splendid villas and gardens congregate as closely as chimneys on the river banks. Thither drive, ride and walk at the close of the day, the wealthy merchants and manufacturers, to rest from their mental and bodily fatigues, and enjoy in the bosoms of their families a few hours of ease and refreshment, amidst the splendid acquisitions of their laborious hours.

Copyright: Kohl, J.G. Ireland, Scotland and England. p. 106 - 107 , 131 - 134.

ANOTHER POINT OF VIEW OF URBAN GROWTH

In the first place, people were not torn loose from a rural life of pleasant and virtually independent enterprise and plunged almost overnight into the horrible existence of an urban factory slum-dwelling proletariat (working class). Many of them were already proletarian; many of them already lived in industrial towns which now grew large, and some of them already worked under the employer's roof.

In the second place, before we beat our anger to white heat in describing the slums, the foul streets, the smoke-laden atmosphere, the lack of water or sanitation, the ravages of disease, etc., let us remember three controlling considerations. (a) Technical - Cheap bricks, cheap sewer or water pipes, and cheap house fixtures were not available till at least 1840, and knowledge concerning public health was still scanty. Compare conditions in the industrial towns with those of non-industrial communities or with rural housing facilities; then it is evident that the housing and sanitary short-comings of the manufacturing districts were not wholly due to the new machinery and the factory system. (b) Constitutional - Until 1835 no government

had adequate powers to cope with the new urban problems.

(c) Economic - The provision of houses was never, until recent years, regarded as a public duty. It was left to private enterprise and the amount the builder put into a dwelling was limited by what the tenant could afford to pay.

Copyright: Heaton, Herbert. The Industrial Revolution in Social Education . Vol II, March 1938 p. 163 - 164.

STATION FIVE
RISE OF UNIONS

1. Eighteenth and Nineteenth Century Great Britain (compulsory)

   (a) Read the article "Why did the Workers Wreck the Machines?" p. 31 - 33, of The Growth of Industrialization. Then answer questions 1 - 3 on page 34.

   (b) Read the article "Why did the Workers Form Unions?" p. 40 - 43 (a and b), The Growth of Industrialization. Then answer 1 on p. 42 and 1 and 2 on p. 43.

2. After completing the activities above, ask your teacher or another student to read your written work and discuss it with you. To indicate that you have completed this requirement, ask this person to jot down several comments, either suggestions for improving answers or strong points evident in your work, and their signature.

DO NOT PROCEED TO THE NEXT STATION UNTIL THIS HAS BEEN COMPLETED.

3. Union Formation in Canada (optional)

   (a) Read p. 144 - 149, Flashback Canada

   (b) Answer the following:

      (i) Why do you suppose the union movement was slow to develop in Canada?

      (ii) What two opposing viewpoints existed?

LESSON 10

PURPOSE

To assist students in exploring the various controls created by governments to check the excesses of the free enterprise/market system.

OBJECTIVES

1. Value

   Identify values underlying the reform movements and the conservative, liberal and socialist groups in society as related to industrialization.

2. Knowledge

   (a) Explain why effective ways of resolving disputes between employer and worker had to be found.

   (b) Give examples of laws used to limit the freedom of owners in the free enterprise system.

3. Skill

   Hypothesize reasons why the most prevalent attitude was against government interference in business.

MATERIALS

1. The Growth of Industrialization, p. 34, 35, 36-40.
2. Flashback Canada, p. 144-149.
3. Optional: The Growth of Industrialization, p. 25.

   Article - The Sadler Committee

   Flashback Canada, p. 132-137

   selections from: Hard Times and Oliver Twist, Charles Dickens.

LENGTH

2 - 4 periods.

PROCEDURE

1. Begin by reviewing with students the list of problems generated in Lesson 8. Tell them that this lesson is intended to help them see a shift from laissez-faire to government involvement. in business, simply because these problems (those listed previously by students) were not being solved in the "marketplace".

   (a) Review with students the concept of free enterprise and the view that laws controlling business represent government interference.

   (b) Ask students to offer hypotheses as to why the most prevalent attitude was against government interference in business. Listen for ideas related to the following:

      (i) England was still an agrarian society that valued individual freedom and independence.

      (ii) Most people were unaware of the conditions of the workers.

      (iii) It was to the advantage of the capitalists, who became both wealthy and politically powerful.

      (iv) Many capitalists were concerned about their labourers and already provided the acceptable working conditions.

      (v) Many parents wanted their children to work in factories and government interference could result in banning child labour.

      (vi) The most powerful members of society regarded industrial growth as the most important societal goal.

      (vii) Others (?)

(c) Post these hypotheses on the chalkboard for verification later. Point out that a variety of reasons contributed to the belief that economic freedom was more important to the society than solving social problems.

2. Different political views have a great impact on government interference in industry. Present the following:

(a) Conservatives - politicians who believe that the traditional way of life should be preserved. This group included many capitalists who viewed government intervention in industry as a threat to their economic freedom (an important aspect of the traditional way of life). Government involvement upsets the natural affairs of humans.

(b) Liberals - politicians who believe that reform is necessary when society begins to suffer. This group included some capitalists too. These capitalists viewed themselves as enlightened owners of industry, providing many benefits for their workers already. Liberals believe that governments should intervene to provide people with some assistance when they need it.

(c) Socialists - politicians who believe that capitalists should not be allowed to be owners of industry at all.

Have students read "What changes did the first socialists want?" p. 34 - 35, The Growth of Industrialization for further understanding of socialist beliefs.

(d) What do each of these political groups appear to value the most?

3. Despite objection by some, the British government began passing social laws. Have students read p. 36 - 40, The Growth of Industrialization and answer questions 1 and 2 on p. 38.

Optional:

(Extends student understanding of how the government collected information on the excesses in industry).

(a) Have the students simulate the inquiries made by government groups by role-playing members of the investigating committee found in the following sources:

(i) "The Evidence of Samuel Coulson", p. 25, The Growth of Industrialization (Britain).

(ii) Sadler Committee (1831-32), included (p. 152-157).

(iii) "Royal Commission on Relations of Labour and Canada in 1889", p. 132, 133, 136, 137, Flashback Canada.

(iv) Excerpts from Hard Times, Oliver Twist by Charles Dickens.

(b) Then have the class write laws controlling industry.

4. After reviewing laws written by students, state:

In addition to the important social laws passed by governments, laws which also helped curb the abuses of industry were the Trade Union Act, 1871, in Britain and a similar one passed in Canada in 1872.

(a) Have students re-read the "blue" portion on p. 40 of The Growth of Industrialization and p. 144 - 149 in

Flashback Canada.

(b) Students should understand from the above that the Trade Union Act was the beginning of government recognition that disputes between employer and worker could not be settled fairly in a laissez-faire economy. As industry grew, means of interaction between the two groups had to be formalized and controlled by law.

5. Review the laws passed in the 18th and 19th century and ask students:

(a) What impact would the new laws have on productivity?

(b) How could industry compensate for any losses in productivity?

(c) To what extent would these laws limit industrial growth?

EVALUATION

Complete Part II, Teacher & Student Evaluation Checklist: A. Market Economy in Eighteenth Century England, p. 158.

MATTHEW CRABTREE TESTIFIES BEFORE A PARLIAMENTARY COMMITTEE INVESTIGATING CHILD LABOUR IN FACTORIES THE SADLER COMMITTEE - IN 1832

QUESTION: What age are you?

ANSWER: Twenty-two.

QUESTION: Have you ever been employed in a factory?

ANSWER: Yes.

QUESTION: At what age did you first go to work in one?

ANSWER: Eight.

QUESTION: How long did you continue in that occupation?

ANSWER: Four years.

QUESTION: Will you state the hours of labour at the period when you first went to the factory, in ordinary times?

ANSWER: From 6 in the morning to 8 in the evening.

QUESTION: Fourteen hours.

ANSWER: Yes.

QUESTION: When trade was brisk what were your hours?

ANSWER: From 5 in the morning to 9 in the evening.

QUESTION: Sixteen hours?

ANSWER: Yes.

QUESTION: How far did you live from the mill?

ANSWER: About two miles.

QUESTION: Was there any time allowed for you to get your breakfast in the mills?

ANSWER: No.

QUESTION: During those long hours of labour how could you be punctual? How did you awake . . .

ANSWER: I was most generally awoke or lifted out of bed, sometimes asleep, by my parents.

QUESTION: What was the consequence if you had been too late?

ANSWER: I was most commonly beaten . . .

QUESTION: In those mills is chastisement towards the latter part of the day going on perpetually?

ANSWER: Perpetually.

QUESTION: So that you can hardly be in a mill without hearing constant crying?

ANSWER: Very much so.

QUESTION: What did you do?

ANSWER: All that we did when we got home was to get the little bit of supper that was provided for us and got to bed immediately. If the supper had not been ready directly, we should have gone to sleep while it was preparing.

Copyright: Parliamentary Papers, 1831 - 1832. "Reports from Committees - Labour of Children in Factories". Irish University Press Series, The Industrial Revolution. (1968) XV, pp. 95 - 97.

ELIZABETH BENTLEY'S TESTIMONY BEFORE THE SADLER COMMITTEE

QUESTION: What age are you?

ANSWER: Twenty-three.

QUESTION: What time did you begin work at the factory?

ANSWER: When I was six years old.

QUESTION: What kind of mill is it?

ANSWER: Flax mill.

QUESTION: What was your business in that mill?

ANSWER: I was a little doffer (who removed spindles from the machines).

QUESTION: What were your hours of labour?

ANSWER: From five in the morning till nine at night, when they were thronged (busy).

QUESTION: What were your usual hours of labour when you were not so thronged?

ANSWER: From six in the morning till seven at night.

QUESTION: What time was allowed for your meals?

ANSWER: Forty minutes at noon.

QUESTION: Had you any time to get your breakfast or drinking?

ANSWER: No, we got it as we could.

QUESTION: And when your work was bad, you had hardly any time to eat it at all?

ANSWER: No, we were obliged to leave it or take it home; and when we did not take it, the overlooker took it and gave it to his pigs.

QUESTION: Suppose you flagged a little, or were too late; what would they do?

ANSWER: Strap us.

QUESTION: Are they in the habit of strapping those who are last in doffing?

ANSWER: Yes.

QUESTION: Constantly?

ANSWER: Yes.

QUESTION: Girls as well as boys?

ANSWER: Yes.

QUESTION: Have you ever been strapped?

ANSWER: Yes, I have seen the overlooker go to the top end of the room . . . and sometimes he has got a chain and chained . . . (the children) and strapped them all down the room.

QUESTION: What was the reason for that?

ANSWER: He was angry.

QUESTION: Had the children committed any fault?

ANSWER: They were too slow.

QUESTION: Were the children excessively fatigued at that time?

ANSWER: Yes, it was in the afternoon.

QUESTION: Were the girls so struck as to leave marks upon their skin?

ANSWER: Yes, they have had black marks many times and their parents dare not come to him about it. They were afraid of losing their work.

QUESTION: Supposing you had not been in time enough in the morning at these mills?

ANSWER: We should have been quartered . . . If we were a quarter of an hour too late, they would take off half an hour; we only get a penny an hour, and they would take a half-penny more.

QUESTION: Were you also beaten for being late?

ANSWER: No, I was never beaten myself. I have seen the boys beaten for being too late.

QUESTION: Were you generally there in time?

ANSWER: Yes, my mother has been up at four o'clock in the morning . . . the Colliers used to go to their work about three or four o'clock and when she heard them stirring, she has got out of her warm bed, and gone out and asked them the time; and I have sometimes been at Hunslet

Car at two o'clock in the morning, when it was streaming down with rain, and we have had to stay till the mill was opened.

Copyright: Irish University Press Series, The Industrial Revolution, "Reports from Committees, Labour of Children in Factories", Parliamentary Papers, 1831-32, XV, p. 95-97.

Teacher: _____ Student: _____

PART II: TEACHER & STUDENT EVALUATION CHECKLIST

A. Market Economy in Eighteenth Century England

The following areas reflect the objectives of this part of the unit. Rank each according to the following:

1. Working up to ability, doing well. (understands material)
2. Could be working harder, do a little better.
3. Not really trying at all.

If there are large discrepancies between our ratings, we will meet for a conference.

	Rating
1. Can identify two different views of how the Industrial Revolution began.	_____
2. Can describe the three stages of the Industrial Revolution.	_____
3. Can explain the Industrial Revolution in terms of a change in the methods of production from human to mechanical power.	_____
4. Can explain how the availability of human and physical resources led to industrialization in 18th century Britain.	_____

5. Can analyze the domestic and factory systems from different perspectives using values and factors of production as points of analysis. _____

6. Can describe the basic philosophy underlying the free enterprise system. _____

7. Can list factors contributing to a life of good quality. _____

8. Can describe five general effects of industrial growth during the early stages of the Industrial Revolution. _____

9. Can analyze values underlying different points of view about the impact of industrialization. _____

10. Can contribute productively to small group discussion. _____

11. Can identify the values base of the reform movements and other political groups in 19th Century British society. _____

12. Can reason why governments were reluctant to interfere in business. _____

13. Can give examples of laws used to limit the freedom of owners in the free enterprise system. _____

COMMENTS: _____

_____

_____

_____

_____

_____

_____

_____

_____

B. Market Economy Today

(Lessons 11 - 14)

This part of the unit deals with questions about how well the free enterprise system (market economy) operates in the third stage of the Industrial Revolution, Automation. With the dynamic forces of industrial growth in society, serious problems have arisen which tend to threaten our traditional beliefs in a market economy. More and more, governments have become involved in directing and controlling the economic affairs of our country.

Specific Research Questions:

1. How well does the market economy operate today?
2. What impact does industrial growth have on our society?
3. What controls are necessary today?

LESSON 11

PURPOSE

To introduce students to the impact of the third stage of the Industrial Revolution on society.

OBJECTIVES

1. Knowledge

   Identify characteristics of a society in the third stage of the Industrial Revolution.

2. Skill

   Formulate generalizations about the relationship between industrialization and specialization.

MATERIALS

1. 35 copies - The Automated Factory (p. 168).
2. Optional film - Buns. Oxford films, 1972.
3. 35 copies - The Post Industrial Society (p. 170).
4. The Growth of Industrialization, p. 61-62.
5. Optional - Canada Yearbook, Statesman Yearbook.

LENGTH

2 periods.

PROCEDURE

1. Begin by telling the students:

   (a) The third stage of industrialization is automation. Advances in technology have made it possible for

tremendous increases in the production of goods with a minimum of human physical effort. Tremendous changes in the skills and education required for work have taken place. Improvements in our standard of living have resulted, but many of our industrial problems can also be related to automation.

(b) The question to be answered relates to these benefits and problems of automation:

- What impact has automation had on our society?

Invite students to speculate on the relationships between the impact of automation on society and the major effects of the early stages of the Industrial Revolution:

(i) increased consumer goods

(ii) changes in the nature of work and attitudes toward work

(iii) growth of cities

(iv) rise of unions

To what extent has automation amplified/emphasized these effects?

2. Distribute copies of the article: "The Automated Factory" and ask students to read it in order to determine whether the article is science fiction or if this factory could really exist. When students have completed the reading, ask:

(a) How many of you think this is science fiction? How do you know?

(b) How does this factory function?

(c) How many labourers are required to run this factory? What kind of tasks do they have? What skills do you think they require to hold this type of job?

(d) How is this factory different from an "assembly line" type of factory regarding:

(i) number of labourers required?

(ii) type of tasks?

(iii) probable skills required by the labourers?

(iv) the way in which the factory functions?

(v) Suppose all factories were automated like this one. What effect would that have on people's lives?

After discussing the above with students, tell them the date and origin of the article:

> i.e., Written in 1952 to describe one of the first automated oil refineries set up by Gulf Oil. The article was written by Eugene Ayres, a chemist at Gulf Research and Development Company, and published in Scientific American.

Optional: (extends understanding of the technology of automation.

Show the film, "Buns" to the class without comment. The camera follows the production of buns from the dough mixing to the finished, plastic-wrapped packages. Without narration, the film comments on the state of technology. Not a single human being is shown in the whole process.

Producer: Oxford Films, 1972.
5 minute, colour, sound.

Ask the students:

(a) What was the message of this film?

(b) What is the nature of automation?

(c) How does it affect the factors of production? Categorize answers according to good and bad effects.

3. Instruct students in the following types of industry and terminology:

(a) commodity producing industry

(b) exploitation of raw materials (e.g., mining, forestry, fishing, agriculture)

(c) manufacturing goods (e.g., food processing, automotive, clothing)

(d) service industry - provides service to primary and secondary industries (e.g., transportation and communications, provides service directly to the consumer)

Then ask:

(a) What kind of occupations can be found at each of these levels of industry?

(b) Which of these occupations will likely disappear as industry becomes more automated?

4. "The Post-Industrial Society" describes a society which has reached the third stage of Industrial Revolution. Have students read the article to decide the extent to which our present society has reached this stage. How do the trends indicated in this article contribute to a feeling of helplessness and alienation?

When students have completed the reading, ask:

(a) What are the major characteristics of the "Post-industrial society", according to this article?

(b) What general statements can we make about the relationships between industrialization and specialization?

(c) What impact does the increase in technical knowledge (see also "The Knowledge Explosion", p. 61-62, The Growth of Industrialization) and specialization have on our lives?

Have students record important ideas in their notebooks.

EVALUATION

Paragraph Assignment: "Attitudes Toward Automation".

Analyze the author's opinion regarding the impact of scientific and technological knowledge on society in the paragraph below, and also identify which of our institutions the author thinks must help people meet new opportunities. Compare this author's opinion of the impact of technology with the article "A Famous Writer's Views", p. 67-68 of The Growth of Industrialization. What is your opinion of this writer's optimism?

"Scientific and technological knowledge and its application have brought new security, new comforts, new dignity within the reach of human beings. They have brought in sight the day of elimination of most kinds of unskilled hand labour - have thus elevated the status and the dignity of the working man - if he is suitably educated to perform more skilled and more interesting tasks. They have also

increased the need for, and social importance of, the highly talented and the well educated, the teachers, the scientists, engineers, doctors, lawyers and industrial managers. Our educational system and our social and political institutions and practices face a great challenge in helping us, and all the world, meet these new opportunities."

copyright: DuBridge, Lee A. "Education and Social Consequences". Automation and Technological Change (1962).

CRITERIA: Award 10 marks as follows:

2 marks - clear statement of author's opinion/values

2 marks - clear statement of personal opinion

4 marks - full comparison of ideas

2 marks - mechanics, spelling, grammar, etc.

THE AUTOMATED FACTORY

It is a bewildering kind of factory, with metallic towers rising 20 stories high, hundreds of miles of pipe, and only an occasional modest building. A few lonely men wander about this special monster doing supervisory or maintenance work here or there ...Every day a quarter of a million barrels of oil flow in-obstrusively into its maw and about as many flow out in the forms of dozens of finished petroleum products -- all profoundly and specifically altered by processing...

The nerve center of this mechanical organism is the control room with its control panel. Here are ensconced the human operator-attendants upon the little mechanical operators of the plant. The human operators watch, they sometimes help or correct the instruments, but only occasionally do they take over the major part of operating responsibility...

On the control panel are many things, indicators of measurements, indicators of valve positions, indicators of the settings of controllers, knobs for changing these settings, facilities for shifting from automatic to manual control, knobs for effecting manual controls, alarms and safety devices, recording of measurements for operation analyses, and recordings of measurements for

accounting, ...Five Hundred controllers, 400 motor operated valves, 15,000 indicators and 800 recorders are in slight but significant motion at all times, like the steering wheel of a speeding motor car on a straight road.

THE POST-INDUSTRIAL SOCIETY

The post-industrial society is defined as one in which more than half the economic activity is devoted to services. The economy is not engaged primarily in the production of goods since production no longer requires a large labour force. Most of the costly factors of production have been re-directed into education, research and personal services. For example, in cities like Ottawa where most of the labour force is in the civil service, few workers are involved in manufacturing products. Jobs are highly specialized, however, and very technical. Almost any institution in this kind of society has specialists. Hospitals, for example, have a great variety, from paramedics and therapists to neurosurgeons and anesthesiologists. These, unlike primary and secondary occupations, are tertiary and quaternary occupations.

Automation creates a new occupational group of individuals who are skilled in manipulating and interpreting specialized knowledge. Such knowledge, of course, in highly technical and very difficult for ordinary people to understand and use. This new occupational group, called "technocrats", gain widespread influence as more and more

institutions become powerless to act on their own. The parts of society become so interdependent that it takes only one small group to hold the rest from functioning smoothly.

LESSON 12

PURPOSE

To examine changing attitudes to work in an automated society.

OBJECTIVES

1. Value
   (a) Define the work ethic as it relates to personal lifestyles.
   (b) Clarify personal values relating to work.
2. Knowledge
   (a) Identify traditional and modern values relating to work.
   (b) Relate worker satisfaction and the problem of alienation to workers' attitudes in our society.
3. Skills
   (a) Develop generalizations from data collected in a questionnaire.
   (b) Survey the community regarding attitudes toward work.

MATERIALS

1. Overhead transparency: Study of Job Satisfaction (p. 177).
2. 35 copies - "The Future of Work" (p. 178).

LENGTH

2-3 periods.

PROCEDURE

1. Introduce this lesson by telling students that a specific problem area in an automated society is changing attitudes

toward work. Ask students if they have heard of any complaints in this regard. What do people usually say about work? What do they appear to value? How well do they represent your attitudes? Extend student lists of values with the following: orderliness, accuracy, neatness, punctuality, success of striving, deference to rank and authority, predictability, impersonality, reliance on rules and procedures. Categorize according to "traditional" and "modern" based on student inferences.

(a) Have students relate these attitudes/values to the two values of materialism and quality of life.

(b) In general, how do the traditional values (work ethic) relate to these two value concepts? How do modern values?

(c) Ask students to draw a relationship between what they know about automation and its possible impact on the change in values of work. (This will be examined again later.)

2. Involve students in an examination of their values re: work and those of the community.

(a) Begin by asking: What is it you hope to get out of a job? List points on the chalkboard. A final list might include such things as money, authority, independence, three-day weekends, travel opportunity, promotional potential, etc.

(b) Ask students: How would an employer view this list if the items were demands by an employee? If we conducted an interview in our community, would people generally have the same demands about their work?

3. Develop a questionnaire with the students, based on their lists and some of the following kinds of questions: What does your work consist of? How does your company show that it is concerned about its workers and the work they do?

Rank order the following three reasons for why you work:

(i) money

(ii) personal satisfaction

(iii) society benefits from my work

(iv) other (identify)

Is there anything you would like to see changed for all the employees of your company?

(a) Have students interview three labourers and three managers in the community and bring the responses to the next class. Working in pairs or threes, have students complete the results of their questionnaire and compare management and labour responses in the following:

(i) How does your company show that it is concerned about its workers and the work they do?

(ii) Rank orders of reasons for working.

(iii) Changes workers would like to see; changes managers would like to see.

(iv) Apparent values.

(b) Have the students make generalizations from the results of their opinionnaires. Discuss the students' summaries in terms of worker satisfaction and in terms of the

alienation characteristics they listed in their notes previously. Did any people interviewed mention things that would relate to productivity? To quality of life? To materialism? How did the response of management differ from the labourers?

4. Present overhead transparency "Study of Job Satisfaction" and compare to the results of the students' questionnaires.
5. Have students read the article: "The Future of Work". In their notebooks, ask students to list the characteristics of automation in industry and, next to each, show how it might have an effect on the "work ethic".

OPTIONAL (Extends understanding)

Have speakers come in to discuss the role of the employer and the role of the employee in today's world. You might have a union/labour person and a member of the Chamber of Commerce, for example.

Have the students draw up questions to ask the speakers. Some questions that might be asked are:

1. Are employees asking for more decision-making opportunities in their jobs?
2. Are employers suggesting that workers have needs beyond money?
3. How do these questions get discussed in the arena of work?
4. During the Industrial Revolution in England, all decisions were made by owners and managers. Has this changed and if so, to what extent?

5. Do contract negotiations include opportunities to discuss job satisfaction?
6. What changes have you seen in attitudes to work?
7. What are the major problems in industry?
8. Other (?)

Students should summarize the talks and generalize about the differences in attitudes toward work and how this affects negotiations on significant areas of concern to both employers and employees.

OPTIONAL (Extends understanding)

Show the film below and have students examine "quality of life".

> "Industries of the Future" - MP 02/46 - considers the course of industry, technology and invention during the coming century. - studies the opportunity and changes that will arise from the development of an industrially and scientifically oriented society. Prod: Columbia Broadcasting Service, 1968. 26 minutes. colour, Sr.

Ask students to view the film for the purpose of answering the following questions. List these on the chalkboard.

1. What will be important to man in the future, according to this film?
2. How do these relate to the general value of quality of life?
3. To what extent will man value materialism; i.e., possession of goods? Is it possible to value both "quality of life" and "materialism"? Why or why not?

EVALUATION

Check student participation in survey of community attitudes.

OVERHEAD

S T U D Y O F J O B S A T I S F A C T I O N

(UNIVERSITY OF MICHIGAN)

REPRESENTATIVE SAMPLE: 1533 WORKERS ALL OCCUPATION LEVELS

QUESTION: HOW IMPORTANT DO YOU REGARD THE FOLLOWING 25 ASPECTS OF WORK?

FINDINGS: (RANKED IN ORDER OF VALUE)

1. INTERESTING WORK
2. ENOUGH HELP AND EQUIPMENT
3. ENOUGH INFORMATION
4. ENOUGH AUTHORITY TO GET THE JOB DONE
5. GOOD PAY
6. OPPORTUNITY TO DEVELOP SPECIAL ABILITIES
7. JOB SECURITY
8. SEEING THE RESULTS OF ONE'S WORK

CONCLUSIONS:

1. THE MOST IMPORTANT ASPECTS OF WORK ARE THOSE WHICH ALLOW LABOURERS:
   - (A) TO BECOME MASTERS OF THEIR IMMEDIATE ENVIRONMENT
   - (B) TO FEEL THAT THEIR WORK AND THEY, THEMSELVES, ARE IMPORTANT
2. THE MOST OPPRESSIVE FEATURES OF WORK WHICH OUGHT TO BE AVOIDED ARE:
   - (A) CONSTANT SUPERVISION AND COERCION
   - (B) LACK OF VARIETY, MONOTONY
   - (C) MEANINGLESS TASKS
   - (D) ISOLATION

THE FUTURE OF WORK

Will Canadians always need to work?

The definition of work hasn't changed. It is only the need to work in the traditional sense of the phrase, that is undergoing drastic change.

John Munro, ex-Minister of Labour

On the surface "work" appears to be a very simple concept. But consideration of it raises many questions: What is work? Do people work for reasons other than money? Are people's attitudes to work changing? What have been the attitudes to work in the past?

Many experts feel that our society is facing a "work crisis" and that finding solutions to it will not be easy. It has not always been like this in North America. However, in the 20th century we have experienced tremendous economic growth. One of the main reasons for this growth has been our attitude towards work.

Essentially, it was believed that most people who worked hard would be successful and would get ahead in society. Wealth and possessions were believed to come from hard work. Also, successful people, because they worked hard, were considered to be morally strong. This attitude toward work and its benefits came to be known as the "work ethic".

These "work" values still exist today. Politicians, to be successful, must talk about job creation and higher wages. School counsellors often explain the purpose of education purely in terms of job opportunity. Many parents want their children to have better jobs than they have had.

High social status is associated with most high-paying jobs. We value work, and some types of work are more valuable than others.

HISTORICAL ATTITUDES

Let us look at some past attitudes toward work. Work hasn't always been considered an important social value. The ancient Greeks, for example, stressed leisure and used slavery as the work system.

The major change to affect attitudes toward work was the Industrial Revolution, which began about 1760 in Britain. Workers were assembled in factories and paid wages in return for performing the tasks that the owner demanded. The situation where one person (for example, a shoemaker) did all the jobs to make a product eventually ended. It gave way to a system where each person did only one job in a series needed to make the product.

Because they were working together, workers were now in a position to organize and bargain for better wages and working conditions. Changes in industry became so widespread that by the early 20th century the economies of North America and Western Europe had become primarily industrial. Previously, they were agricultural. A country was considered to have an industrial economy when more than half of its people were living in cities.

Another change has since occurred: The majority of our workers today are not involved in the production of real material products. They are involved in service industries where, instead of producing a product, something is done for someone. Finance, education, marketing and data processing are examples of service industries.

PROBLEMS TODAY

In spite of our economic success, we still have problems:

One major problem is the assembly line. Although its use has allowed workers to earn good wages, an assembly line can be extremely boring to work on. The result is that many assembly line workers are not achieving the productive increases that are expected of them.

Labour-management relations seem to be at very low ebb; strikes are constantly in the news.

The attitude some people have toward work is changing. Some experts explain this by saying the expectations of workers are changing. They argue that our wealthy society has created a situation where material well-being, through high wages, is taken for granted. Television tells us we can all enjoy the good life all day.

Also, absenteeism is apparently increasing.

Management complains that workers are not responding to authority the way they used to do.

Workers complain that many companies are retiring people early; even though the people are useful and want to produce.

There is debate over the value of the four-day week.

Opposition parties complain about high unemployment. Yet businessmen say they cannot find people to perform certain uncreative jobs, and not just after the work day. Yet, the assembly line does not permit us this good life during the day. High wages have not been enough to maintain normal productivity increases.

Simply, workers' expectations are high and when these expectations are not met they do not respond as employers would like them to.

Copyright: Botting, Dwight - Canada and the World. "The Future of Work".

LESSON 13

PURPOSE

To assist students in understanding that the proliferation of goods and services is part of the phenomenon of industrialization.

OBJECTIVES

1. Value

   (a) Appreciate the diversity of goods and services made available through industrialization in market economics.

   (b) Question the values of businesses and of consumers in the production and consumption of some goods and services.

2. Knowledge

   Use examples to demonstrate understanding of the statement: "The increased production that has resulted from technological advances has led to an increase in leisure time which in turn has created demands for new goods and services.

MATERIALS

1. p.67-68, The Growth of Industrialization.
2. Newspaper clippings (see samples p. 186-192).

LENGTH

1 period.

PROCEDURE

1. Tell students: Industrial development has resulted in many new goods and services for consumers, as well as an increase in economic activity devoted to leisure. Examine the list of

new products identified on p. 61 of The Growth of Industrialization which have been created in the last 40 years.

(a) After they have read the list in The Growth of Industrialization, involve students in the following:

Let us brainstorm additional goods and services that exist today that probably were not available during the first stage of the Industrial Revolution.

(b) When the chalkboard is filled with this list, have students make a list of the TOP TEN items in order of utility; i.e., most useful to least useful, in their notebooks. Then, have them make a second list of the BOTTOM TEN items; i.e., the least useful to most useful; share the lists in class.

(c) With the class, identify all the items on the board that pertain to leisure.

(d) Ask the following:

(i) How many of the items were leisure-related in the TOP TEN list? How many in the BOTTOM TEN list?

(ii) What does this tell us about the importance of leisure in our lives?

(iii) What relationships can we find between industrialization and the production of goods and services related to leisure?

(Consider the following:
- time available for leisure
- money available
- broadened interests
- more technological creations for leisure)

2. Compare the above lists with that of James Michener, p. 67 & 68 of The Growth of Industrialization.

What is his view of the goods and services created by industrialization?

3. Newspapers usually have stories about new inventions or creations. Have students collect several and then apply the following questions to their articles:

(Three articles from the Red Deer Advocate are included as samples. Notice the range in utility of the goods.)

(a) How useful are these goods/services?

(b) If they are related to leisure, how will they enrich our lives?

(c) If a person prized these goods highly, what would it indicate about his values as related to materialism? To quality of life?

Students should record answers in their notebooks.

4. Present the following to students:

The proliferation of material goods is especially characteristic of an industrialized society, especially in a market economy. Since resources and the other factors of production are limited, does that mean that businesses are not able to produce whatever they wish? What are the constraints in determining what will be produced? What does that say about what consumers value?

After discussion, have students record conclusions in their notebooks.

EVALUATION

Evaluate student work on three newspaper articles. Check for completion of all questions and especially, for the level of understanding of the value concepts: materialism and quality of life.

1 point for each article collected

2 points for completion of all questions

5 points for accurate application of value concepts

10 points total

PIN TAKES HASSLE OUT OF BAR HUSTLE

OTTAWA (CP) - A love pendant designed to rid hustling of its hassle is being marketed by an Ottawa entrepreneur.

The new come-hither symbol in the mating game has three separate labels.

One, a pendant with a man with outstretched arms invites contact: The wearer is open for a relationship.

Dave Van Dusen, who markets the pendants, say it is the biggest seller.

The second, a couple with their arms around each other says the wearer is happily attached (married or unmarried). This is the second-most popular item.

The third, a man with arms folded on a gold background warns an interested comer to back off. The wearer is single and content. So far, says Van Dusen, few have been sold.

He says that the pendants are selling like hotcakes. They are deceptively simple but not so inexpensive selling for $25 to $100--but they separate the availables from the untouchables at a glance.

Van Dusen, whose company Van Lock Expressions Inc. is marketing the pendants, says the pendants are popular because they are an idea whose time has come.

"While more and more people are staying single there has never been anything that would let others know just where they stood as far as personal relationships (were concerned)," he says.

He got the idea in a brainstorm during his days as an Ottawa bartender.

"What I saw almost nightly were a lot of awkward situations that just didn't turn out that way at all.

"Women whom I definitely knew were not married were wearing rings just to make sure they didn't get bugged.

"Guys who were interested in meeting other women were having a rough time and shy women often didn't quite know what to do with themselves or how to let the guys know they were interested."

Copyright: Canadian Press

COMPUTER DESIGNED HOMES DEVELOPED IN SASKATCHEWAN

NORTH BATTLEFORD, Sask. (CP) -- A small North Battleford house-building firm may be on its way to the big time because of an innovative method it has developed to design houses by computer.

Designex Buildings Ltd., which started building houses eight years ago with a staff of nine and now has more than 50 employees, spent four years and $500,000 developing the computer program, which its management believes is unique in Canada.

In fact, general manager Bill Carson said in an interview, "I don't know of another in North America."

The program allows customers to design their own houses, or modify any of the 400 plans Designex has on file, in minutes.

Desired features are put on the screen of a tabletop computer and, after the customer has experimented with alternate arrangements, the integrated house plan emerges from a high-speed printer.

"It used to take three to six weeks to draw up the plans," Carson said. "It takes two and a half minutes with this machine."

Designex, which produces modular and custom-designed prefabricated houses, has only recently put the

finishing touches on its computer-design process and should feel the impact on sales this year, Carson added.

Sales last year were about $5 million.

Carson said the computer program started with one of the firm's owners, Michael Maher, a computer expert who is dean of commerce at the University of Saskatchewan.

The firm sells prefabricated and modular houses across the prairies, with 28 dealers in Saskatchewan, four in Alberta and one in Manitoba.

Many customers live in rural areas where tradesmen are not available and the modular houses, which come in two sections, provide them with large, modern housing.

For those wishing to save money by doing their own work, Designex offers several optional phases of completion. In a phase-one house, the windows and siding are in place but the customer does his own insulation, wiring and plumbing.

Copyright: Canadian Press

MOLE MAY END WELL FIRES

The Mud Mole is likely going to make millions for its inventors, one of them says.

It's a device that monitors and displays the mud functions of a drilling rig, Gary Bunthorpe of Calgary explains.

Made by Rigtronics Systems Ltd., 4556-14th St. N.E., Calgary, the Mud Mole might even put Red Adair, the internationally famous gas and oil well firefighter, out of business.

Mr. Gunthorpe says Rigtronics Systems has received almost 100 enquiries and orders from drilling rig operators around the world. The Mud Mole has a potential of 400 units in this country alone, says Mr. Gunthorpe.

Rigtronics Systems Ltd. established its plant with the aid of a $104,000 Alberta Opportunities Company loan. The plant which employs four persons, opened Oct. 1 and has just about finished building its eight Mud Moles. They cost "in the neighbourhood" of $20,000 each to manufacture and are composed of two steel boxes, each about the size of a two-foot cube, and the "probes".

The six inventors "started turning the wheels in August" to create the Mud Mole, says Mr. Gunthorpe.

"It's a float with a magnet in it which rides up and down on the surface of the mud in the tanks." explains Mr. Gunthorpe. "Down the middle of the float is a probe. It senses the level of the magnet in the float. And that's how it detects the mud level."

In addition, it detects 'blowouts' which can cause fires.

"A blowout can be caused by quite a few things. That big fire they had to call Red Adair in from Texas for, the one at Drayton Valley, was caused by a blowout. The drill hits a high-pressure gas pocket. It forces its way to the surface and it is coming out at 6,000 pounds of pressure or even higher. The Mud Mole gives you a chance to predict this. It takes several hours for the gas to come to the surface. It is pushing mud out in front of it. The Mud Mole detects abnormalities in the mud flow. That will tell you something is going on down there."

Mr. Gunthorpe says the Mud Mole would have prevented the recent Drayton Valley blowout.

This claim is spurring telephone calls and letters from drilling rig operators all over the world.

Since October, four Mud Moles have been placed out in the field.

"Once we get it out, make sure it's working 100 per cent and we don't need any more major changes, we intend to make 22 in a batch. We'd like to get that done by the end of September."

It takes two man-months to build one Mud Mole with the present manufacturing technique, says Mr. Gunthorpe.

"We'll probably get that down with mass production techniques."

Mass production will cost money and Rigtronics Systems "needs any financing we can get," he says.

There, are "far too many (orders) for us to supply."

The electronics of the device enable it to perform four functions simultaneously. The Mud Mole monitors the mud volume in storage tanks, monitors the mud flow out of the drilling hole, monitors the strokes per minute of the pump which forces the mud into the hole and keeps track of the density and amount of mud in the hole, all of which are critical measures in detecting and preventing a possible blowout.

Copyright: Richard, D'arcy, The Red Deer Advocate, Feb. 7, 1979.

LESSON 14

PURPOSE

To assist students in drawing relationships between materialism and alienation in industrialized society.

OBJECTIVES

1. Value

   (a) Clarify the extent to which materialism is an important force in their personal life.

   (b) State examples to show that materialism is a value prevalent in industrial societies.

2. Knowledge

   Use examples to demonstrate understanding of the generalization:

   > As traditional roles and institutions become less significant in highly industrialized societies, many people suffer alienation and loss of identity.

MATERIALS

1. 35 copies - "Materialism in Industrial Society. How does it affect us?" (p. 201-203).
2. 35 copies - "Swedish Youths" - A Case Study. (p. 199-201)
3. "The Danger of Future Shock" (p. 71-72) The Growth of Industrialization.

LENGTH

2 periods.

PROCEDURE

1. Review the role of industrialization in the proliferation of goods and services. Ask students: Can you recall what the following terms mean?

   (a) standard of living?
   (b) per capita income?

   (See Lesson 9)

   Then ask the following:

   (a) How does an increase in a family's standard of living also improve their quality of life?

   (Students should generate examples such as being able to own a television or being able to go on a trip to a foreign country, thereby gaining broader experiences and opportunities for a richer, full life; more leisure time for family activities.)

   (b) How can a pre-occupation with increasing the family's standard of living have a detrimental effect on quality of life?

   (Listen for examples such as the breadwinner, father or mother - and often both - are so involved in their jobs that their children suffer from a lack of family experiences.)

   (c) What other institutions are affected by increases in standard of living?

   (work, education, law, etc.)

   How is quality of life affected?

2. Distribute the article "Materialism in Industrial Society - How does it affect us?" (p. 201 - 203) Tell students:

Each person in the reading is handling the problem of living in an industrial society in a particular way. Answer these two questions for each item in the reading: (Put questions on the chalkboard).

(a) How important are material goods and services to them?

(b) How does this affect the quality of their life?

3. Discuss student responses to the questions above. Introduce the concept: Alienation - characteristics include a loss of identification with the "self", (e.g., Who am I?), an inability to relate to a significant other, a loss of respect or belief in social institutions, a loss of personal involvement in one's work. Relate the concept to the reading. Ask students: What are some examples of alienation in our society?

4. Then, using a random system of assigning students to groups, form buzz groups in which 5 to 6 students assess the extent to which their group is materialistic. Write the title of the activity "Materialistic? Who? Me?" on the chalkboard. Tell students:

You will be asked to report in 15 minutes. You will need a reporter and a chairperson. The chairperson is to ensure each member gets an opportunity to respond to the question "Materialistic? Who? Me?" In the last few minutes, your group must arrive at a consensus regarding the extent of materialistic attitudes evident in your group.

5. Introduce students to the concept of "Future Shock" by asking: Can you recall some examples of the destructive effects of materialism in society? (Review the reading: Materialism in Industrial Society - How Does it Affect Us? p. 201-203).

   (a) Tell students:

   Not only does our environment consist of man-made goods but also that many of us pursue these goods to the exclusion of all other things in life. There is a tendency for us to lose our sense of what is real. This is compounded with the rapidity of change in our industrialized society and the disappearance of traditional roles and institutions. We begin to suffer from something like a nervous breakdown. The book Future Shock, by Alvin Toffler, was written to explain this complex phenomenon.

   (b) Assign the reading "The Danger of Future Shock", p. 71-72 in The Growth of Industrialization.

   (c) Discuss what relationships exist between industrialization, materialism, and alienation. Students should jot these ideas in their notebooks.

EVALUATION

1. Have students apply what they have learned about materialism and alienation to the article: "Swedish Youths: A Case Study" (p. 198). Then assign the following:

   In two or three paragraphs, describe the extent to which you believe Canadian youths are similar to Swedish youths in their

outlook on life and society.

Criteria:

(a)	An overall statement of comparison.	1 point
(b)	3 general similarities/differences with specific examples from Canadian life to illustrate each.	9 points
(c)	Use of the concepts: industrialization, alienation, change in society, materialism.	8 points
(d)	Mechanics of writing - clarity, spelling, grammar.	2 points
	TOTAL:	20 points

2. Conduct Part II: Teacher and Student Evaluation Checklist; B. Market Economy Today (p. 204).

SWEDISH YOUTHS - A CASE STUDY

Swedish youths are well aware that they live in one of the most prosperous societies in the world. They know that they enjoy a material well-being and a degree of personal security which would be practically unimaginable to most of the people of the world. Naturally, they are glad to be a part of the Swedish nation and to be spared the hardships that most other people endure.

But these same young people often have a guilty conscience about their advantages. They are unable to forget that starvation and misery are very real for so many people of the poor nations of the world. Too, young people in Sweden and in the other post-industrial nations are troubled by the way in which their society uses its tremendous wealth. Many young people feel that the quality of life has deteriorated with the coming of advanced industrialization, urbanization, and bureaucratization. They see the environment despoiled and people dehumanized. They wonder if post-industrial society can be a tolerable setting for humans to live humane, just, gentle lives. The following poem expresses some of these feelings.

PROBLEMS OF YOUNG PEOPLE

Be well aware of this:
We're not yet thirty
This gives us the upper hand
This gives us the advantage
We're one jump ahead of you
The only generation gap
The first real one
is between you and us
We have the upper hand
The upper hand of the doomed.

We're going to starve to death
We're going to choke on your exhaust fumes
poisoned by your chemicals
We'll be blown up by your bombs
shot in your wars
We'll never reach what you call a respectable age.

You know what you've achieved
We know what you've achieved
You're the ones to feel fear
You experiment
You play politics and pray
We have no such need
We are free
The freedom of the doomed.

We cannot save ourselves
not even at the expense of others
Our personal end is uninteresting
Our end is the end of the species
We can dare to see ourselves as a species
For the first time through the milleniums
we have the courage.

We can absorb your information
and we can avoid your fixations
we can ignore your conflicts
Our end is the end of the species
We can only help you
Help you approach your end
Ours is determined by fate
Therefore we can say "we"
and also mean you
We have the only true freedom
The freedom of those who are doomed.

- Sanna Westin, age 17, Student

Swedish youth feel that the economy may be misdirected. They see great quantities of consumer goods being produced while work conditions remain less than ideal and precious resources are consumed. They are not sure that they want to devote all their working lives to jobs that do little to improve the living conditions of most of the people of the world. Some young people have formed an organization call the "Gifted Committed Conscious Swedish Youth." They take only temporary jobs, deliberately rejecting the idea of building a career. They reject the idea of working hard just to acquire the means to buy more and better things.

Copyright: Hopkins, Karen, Sweden: Focus on Post - Industrialism, p. 91 - 92.

Materialism in Industrial Society - How Does it Affect Us?

MISS X, LONDON, ENGLAND

Miss X, 21, is a sales receptionist. She has been buying clothes since "I had my first Saturday job when I was 14 and earned £1". She buys something nearly every weekend between £3 and £8 and spends most of Saturday looking for clothes. "I go into every dress shop each week."

copyright: Primrose, Moran, "Hers on Fashion." Oxford Mail, November 1972.

BOBBY MOORE, ENGLISH FOOTBALLER

"First let me admit that I never, in my wildest dreams, expected to earn as much money as I now pay in income tax." ...

"All this is very exciting, of course it is. But I realize that it will last only as long as I am at the top. I would be stupid to think I am always going to have that sort of money."

"But I have liked having it and I have enjoyed spending. I certainly want to maintain my standard of living and so I must try to ensure an income when my footballing reputation begins to lose its appeal, and that is why I have invested my money in business interests."

Copyright: Moore, Bobby, Footballer, England, 1970.

DAVE WILLIAMSON

Dave Williamson, 43.

Why did he and his wife, Julie, give up the "good life" in a North Shore suburb - a before-dinner martini on the patio, genial neighbours, a good job . . . ?

"Sure we had made it. But underneath all the affluence - and the beautiful women at the advertising agencies and all that - I had a feeling that something was missing in my life. I wasn't really satisfied. I rationalized the need for earning a good income. I felt there's something missing in this. Certainly everyone else was doing the same thing. Yet there was something missing." (This couple went to live and work in a poor Negro community in downtown Chicago.)

Copyright: Terkel, Studs, Division Street: America, 1966.

SIMON AND GARFUNKEL

In the naked light I saw
Ten thousand people, maybe more.
People talking without speaking
People hearing without listening
People writing songs that voices never share
No one dare
Disturb the Sound of Silence.

"Fools", said I, "they do not know
Silence like a cancer grows
Hear my words that I might teach you
Take my arms that I might reach you" . . .

And the people bowed and prayed
To a neon god they made . . .

("The Sound of Silence", by Paul Simon and Art Garfunkel, Pattern Music, Ltd. 1970)

Copyright: Turner, Helen, Talking about the Consumer Society, p. 18-19.

Teacher: _____ Student: _____

PART II: TEACHER & STUDENT EVALUATION CHECKLIST

B. Market Economy Today

The following areas reflect the objectives of this part of the unit. Rank each according to the following:

1. working up to ability, doing well (understands material)
2. could be working harder, do a little better
3. not really trying at all

NA not covered yet in this unit

If there are large discrepancies between our ratings, we will meet for a conference.

	Rating
1. Can explain a relationship that exists between industrialization and specialization.	_____
2. Can describe characteristics of a society in the automation stage.	_____
3. Can analyze production and consumption of certain goods and services to determine some values of producers and consumers.	_____

4. Can give examples to demonstrate understanding of the relationship between increased productivity, technological advances, leisure, and the creation of demand for new goods and services. _____

5. Can analyze personal behaviours to determine the influence of materialism on one's life. _____

6. Can list examples of alienation and loss of identity in society. _____

7. Can draw relationships between materialism and alienation in an industrialized society. _____

COMMENTS: _____

_____

_____

_____

_____

_____

PART III

Conclusion

LESSONS 15-18

This part of the unit requires students to pull together all of the ideas and abilities learned during the unit so far. Specifically, students must synthesize the data, resolve the issue, explore alternative solutions, make a decision, and, if possible, take some form of action. Without a confrontation of the issue at this stage, the study becomes nothing more than a meaningless collection of knowledge and activities. In many ways, this conclusion allows students to develop personal satisfaction, as they relate what they have learned to their own lives in a concrete way.

More than in other parts of the unit, the teacher must encourage without pushing and facilitate without directing.

LESSON 15

PURPOSE

To synthesize what has been learned about the issue.

OBJECTIVES

1. Value

   Explain how materialism and quality of life are values underlying the process of industrialization.

2. Knowledge

   Recall pertinent information about industrial growth.

3. Skill

   Synthesize information related to the issue.

MATERIALS

1. 35 copies - Synthesis Chart (p. 211).
2. "Blue Print for Survival" (p. 72-73) The Growth of Industrialization.
3. 35 copies - Chart, "Industrial Production and the Environment" (p. 212).

LENGTH

2 periods.

PROCEDURE

1. Re-focus student attention on the issue: "Should we limit industrial growth?" by re-introducing the concept of "limit".
   (a) Have students read "Blueprint for Survival".
   (b) Present the chart entitled "Industrial Production and the Environment" (p. 212). Ask students:
      (i) What trends do you see?
      (ii) How does industrial development contribute to these trends?

(iii) What solution is suggested here?

2. Review what has been learned about the issue by having students complete the Synthesis Chart (p. 211). Assist students where necessary, especially in recalling important relationships to the concept of industrial growth and the concept of limit.

(Specific facts/examples may be written down in note form on another sheet, but this chart is only intended for general statements.)

3. After discussing the synthesis chart, ask students:

Can anyone explain how the two value concepts: materialism and quality of life, relate to each of the five areas of study?

(a) historical background of industrial development

(b) present form of market economy

(c) role of technology and labour in industrialization

(d) benefits of production

(e) problems of production

Analyze each statement made about the two values.

4. Then ask the following:

(a) In which of the areas of study did you believe a positive relationship between quality of life and industrial growth existed?

(b) To what extent did "materialism" come into conflict with "quality of life"?

(c) To what extent can both values influence industrial growth without conflict?

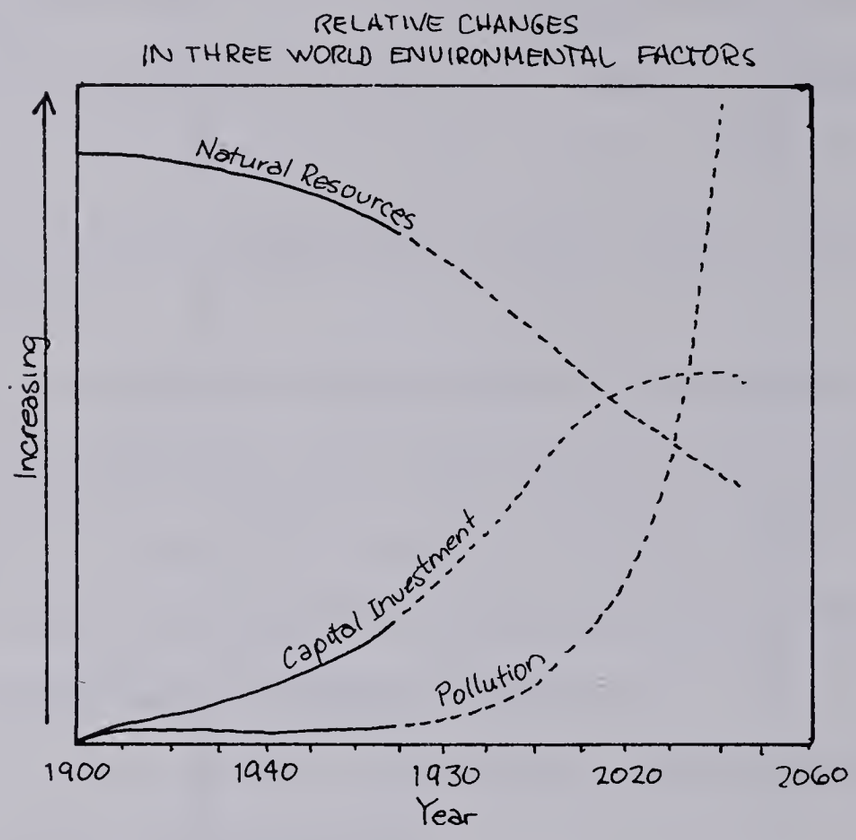
EVALUATION

Check satisfactory completion of synthesis chart.

SYNTHESIS CHART

Information on the Issue	Industrial Growth	Limit to Growth
Historical Background		
Present Market Economy		
Role of Technology and Labour		
Benefits of Production		
Problems of Production		

INDUSTRIAL PRODUCTION AND THE ENVIRONMENT



You can see from the graph that the lack of resources and the extent of pollution may eventually block further industrialization.

These researchers also point out that most of this capital investment would be taking place in the industrialized countries. The people in the industrialized countries require huge amounts of manufactured goods to maintain their present standard of living. Unless these countries reduce their demand for goods, the investment in capital goods will continue to grow exponentially. The

world environment will continue to be in danger. All countries will be affected, they say, not just those with high capital investment.

Copyright: Sweeney, Robert, "Environmental Concerns", p. 149.

LESSON 16

PURPOSE

To make a decision about the issue.

OBJECTIVES

1. Value

   (a) Clarify personal values regarding materialism and quality of life.

   (b) Assess the consequences of each alternative according to personal values.

   (c) Decide whether continued advances in technology will enhance human welfare.

2. Skill

   Identify consequences for each alternative decision regarding the issue.

MATERIALS

1. 35 copies - Alternatives and Consequences worksheet (p. 218).
2. 35 copies - Qualify of Life Scale (p. 219).

LENGTH

1 period.

PROCEDURE

1. With the class, brainstorm alternative positions on the issue: "Should we limit industrial growth?" Possible alternatives include:

(a) No, allow the market place to take care of the problems.

(b) No, speed development up to find technological solutions to the problem.

(c) Yes, slow development down so that alternatives can be found.

(d) Yes, halt development and adopt a new lifestyle and society.

2. Break the class into small groups; have each group take on one of the alternatives and think of possible consequences. Ask each group to appoint a spokesman who will report to the total class. (A worksheet may be used to help students visualize the process, p. 218.)

3. Say to students:

(a) A student made a rating scale to measure her quality of life. She chose 15 factors that she thought were important for a good quality of life. Some of her factors were fresh air, healthful food, and clean water. Then she used a scale of 0 to 100 to show how she assessed each of these factors in her environment. For example, if the quality were perfect, she would have given it a value rating of 100. However, she decided that the air in her community was less than ideal. She gave the air factor 75 points. She gave "clean water" only 60 points of the possible ideal 100. She rated healthful food at 90 points. When she added up the score for all 15 factors, she found that her quality of life was only 70 percent of what she considered ideal.

(b) Construct your own scale for quality of life. Which factors will you choose for your scale? How will you rate them? What is your final score? Compare your scale and your results with those of your classmates.

Copyright: Sweeny, Robert, Environmental Concerns, p.12

4. Instruct students to do the following after you have distributed copies of "Quality of Life Scale" (p. 219).

Apply your "Quality of Life Scale" to the list of alternatives and consequences in the following way, using the chart before you.

(a) For each consequence, give up to a total of 100 points. (Make sure that your rating for each one is consistent with your previous scale completed in 3.)

(b) Determine the rating for each of the alternatives. Which one has the highest rating? Do you agree that, overall, that is the best solution to the issue? Why or why not?

EVALUATION

Say to students:

Prepare a poster expressing your personal position on the issue: "Should we limit industrial growth?"

If another student, or several other students, share your position, you may wish to work together.

1. Collect the following materials:

(a) magazines and newspapers

(b) coloured poster paper (18" x 30" size)

(c) felt pens, pencils, erasers, rulers, scissors

(d) 8½" x 11" white drawing paper

2. Decide what your position is and the main reasons for it.

3. Sketch on 8½" x 11" white drawing paper your ideas for your final poster. Plan to include some lettering (e.g., the actual issue, a short phrase, a poem) and some drawing, or picture/s to illustrate your position

4. Check with your teacher to ensure that you have given sufficient thought to the drawing.

5. Work on the large sheet of poster paper using the small sketch as a guide.

CRITERIA

	Student	Teacher
1. Demonstrates understanding of the issue.	/3	/3
2. Position is clear, easily recognizable.	/3	/3
3. Evidence of originality and creativity.	/2	/2
4. Poster is attractive; neat.	/2	/2
	/10	/10

Combined Total: /20

Check for completion of the "Alternatives and Consequences Worksheet" (p. 218).

ALTERNATIVES AND CONSEQUENCES WORKSHEET

Should We Limit Industrial Growth?

Alternative Positions		Consequences
1. No, allow the market place to take care of problems in society.	a.	e.g., labour, unrest cont.
	b.	
	c.	
	d.	
	e.	
2. No, speed development up to find technological solutions to problems.	a.	e.g., more automation in industry
	b.	
	c.	
	d.	
	e.	
3. Yes, slow development down so alternatives can be found.	a.	e.g., decrease in purchase of consumer goods
	b.	
	c.	
	d.	
	e.	
4. Yes, halt development and adopt a new lifestyle and society.	a.	e.g., variety of consumer goods disappears
	b.	
	c.	
	d.	
	e.	

QUALITY OF LIFE SCALE

Alternatives	Consequences			Overall Rating
1. Allow the market place to take care of problems in society.	a.	/100	/5 (total of a.-e. divided by 5)	/100
	b.	/100		
	c.	/100		
	d.	/100		
	e.	/100		
2. No, speed up development to find technological solutions to problems.	a.	/100	/5	/100
	b.	/100		
	c.	/100		
	d.	/100		
	e.	/100		
3. Yes, slow development down so alternatives can be found.	a.	/100	/5	/100
	b.	/100		
	c.	/100		
	d.	/100		
	e.	/100		
4. Yes, halt development and adapt a new lifestyle and society.	a.	/100	/5	/100
	b.	/100		
	c.	/100		
	d.	/100		
	e.	/100		

According to this scale, the best alternative is:

_____

LESSON 17

PURPOSE

To explore alternative actions for solutions to problems associated with rapid industrial growth.

OBJECTIVES

Skill

(a) Formulate alternative solutions to the issue on the basis of alternative perceptions of a life of good quality.

(b) Analyze alternative solutions using personal conceptions of a life of good quality and the feasibility of taking action.

MATERIALS

35 copies - "Creative Action" articles (p. 222-229).

LENGTH

2 periods.

PROCEDURE

1. Ask students to brainstorm ideas on ways to eliminate some of the problems associated with industrial growth in market economy. (Review problems associated with work, labour relations, goods and services, urbanization, etc. if students have difficulty beginning.) Accept all student responses. Tell students not to comment on each other's suggestions and to give you ideas as quickly as you can write them on the chalkboard. Allow 3-5 minutes for this.

2. Distribute copies of "Creative Action", which outline some specific actions in more detail than the brainstorming items. Explain the three questions provided as a guide for analyzing the actions. If necessary, use one of the actions as an example. Then, have the student spend about 20 minutes reading and thinking about the suggestions. Those students finishing early can describe in writing another action, perhaps one of the items brainstormed earlier.

3. Divide the class into groups of five students. Their task is to arrange the list of actions from "first priority" to "last priority". (If a ninth item had been created by a group member, it should be included in the list.) At the end of the discussion, one group member must report the list of priorities to the class with two to three reasons for an item's placement in the list. A written report may be completed and handed in for grading. Justifications for placement of items in a particular priority should reflect the group's perception of a life of good quality.

4. Listen to group reports. Allow students to ask questions of the group presenting. Where clarification is required, probe the group's reasoning. Check especially for inconsistencies and faulty reasoning. Ensure that students are clear about what they consider to be a life of good quality.

EVALUATION

Check participation in group activity.

CREATIVE ACTION

Many problems in our society require creative thought and, often, courageous action. The problems associated with rapid industrial development are especially difficult because all aspects of society, social, economic, and political as well as the environment are affected.

Think carefully about each of the creative solutions. Here are some questions which you may use in analyzing each of them.

(a) What probable impact will this action have on society and the environment? (Will it solve some of the problems created by industrialization without creating more serious ones?)

(b) What possibility is there that this form of action could be taken, given legal, moral, financial, and/or technical constraints?

(c) How is this action related to the creation of a life of good quality? (If I were to support this action, would it be consistent with my present values?)

1. Set up a guaranteed annual income program which would ensure that all Canadians would enjoy a minimum standard of living. For example, if it takes $12,000 for a family of four to maintain a satisfying life, complete with a three bedroom home - furnished, a car, food and clothing, and a holiday once a year,

then the government would either supplement present earnings to bring it up to that level, or if no one is employed in the family, send monthly cheques to equal that yearly sum. The federal government's Local Initiatives Program and the Opportunities for Youth are examples of forerunners to the G.A.I. program. Low paying, non-satisfying jobs may disappear as people would not be willing to work when they could get as much or more money on a guaranteed annual income. Work may be redefined also, as an activity which is self rewarding rather than just a money-making activity.

2. Organize factory workers in production teams of 15 to 20 and give each work group responsibility for completing an entire portion of the product. For example, in Sweden, Volvo manufacturers, finding that workers became bored with assembly line work, organized them according to a function of the car, such as the electrical system. Each group has its own workshop in the plant and the group decides who does what job and the jobs are rotated. The group also decides how to do the work, and how quickly, within limits. If a

problem arises, the group solves it. There are no supervisors in the team.

Volvo has found the system works. Productivity is the same or better than in the traditional plants, and there are other benefits. Absenteeism is low, staff turnover has dropped, quality has improved and the workers are much more satisfied. This is because their work environment is controlled by themselves and they are able to think and make decisions. They are no longer doing robot jobs with robot minds.

Copyright: Canada and the World , November 1978, p.20

3. Establish work schedules based on flextime. Instead of punching in and out at the same time each day, workers are allowed some flexibility in setting their own hours of work. Each person has to work a minimum of hours a week, but they can choose, within limits, when they work them. If you hate getting up in the morning, you can start later and finish later without getting yelled at for not getting to work on time.

Already, 12½ per cent of Canadians are on Flextime.

Copyright: Canada and the World , November 1978, p.20

4. Intersperse school, work, and leisure throughout

ones lifetime.

Dian Cohen, economist: Our traditional approach to work is to do it in a straight line: We go to school in our youth, maybe until we're 18 or 20 years old, then we work for the next 40 or 50 years and finally spend the rest of our lives in retirement... One alternative is to change the "linear" approach to life to a cyclical one. In other words, throughout a lifetime, school would be interspersed with work.

A person would leave school perhaps at 15, work for a year, go back to school for a couple of years, work again, and so on right to death.

Such a plan would allow people to keep their skills up to date in an age of rapidly changing technology.

It would also allow people to enjoy much of their leisure time during their "peak" years, rather than just in old age.

Copyright: "Canadians at Work", People Talking Back, January 1979, Canadian Association for Higher Education.

5. Re-evaluate the importance of work in our society.

MORE LOAFING by Walter Prytulak

We ought to recognize that work does not make sense to everyone, and that only a creative endeavor makes sense to some. It is below human dignity to be engaged in work that could as well be done by a computer or a machine. Ideally, the only work worthy of man is to program a computer to program other computers to build machines to manufacture that which a man has designed. The sooner a man becomes liberated from his self-concept as a machine or as an (attachment) of a machine, the better.

In this age of technology and automation, it is archaic to think that if one person is idle, another will have to work twice as hard. This was true in the stone age, when one day's work equalled one day's food for one man, and he who did not work starved. In our age one man can produce enough to feed thousands, by just moving his finger, and even this function can be automated eventually. It is not that one man should work and thousands stand idly by, but that no one but a machine should work, and that thousands should live in luxury and plenty. The creative work in our society should then become the privilege of the creative genius..., of those who are inquisitive, curious, eager to discover and above all, those who are madly in love with work.

Let us proceed rapidly with automation and allow those who do not want to work to retire comfortably at a progressively lower age.

The idler may be the man of the future. He has plenty of time to think. He has the courage to think about himself without feeling depressed, which cannot be said about many of those whose noses are to the grindstone.

Copyright: Prytulak, Walter, M.D., D. Psy. Woodstock. "The Globe and Mail," Toronto, August 17, 1970

6. Join producer organizations. Producer organizations are made up of several countries that agree to control the supply of a single natural resource, such as petroleum or iron ore, in order to control its price. The Organization of Petroleum Exporting Countries, OPEC is an example. By limiting the supply of oil, they were able to charge four times as much for it. Countries needing the oil had to pay the higher price or go without it. Consumption of the non-renewable resource is thereby reduced and, presumably, industrial growth limited. Canada is an exporter of a wide variety of raw materials such as iron ore, nickel, asbestos and wheat.

7. Ban all strikes and send all labour disputes to binding arbitration before a work stoppage occurs. The arbitrator's award could be determined jointly by labour and by management. The demands of each party are studied and a mid point is established between the two demands. Then, by secret ballot both management and labour indicate their final position. The position closest to the mid point established earlier wins the award. Both management and labour must accept the award regardless of which side in the dispute wins.

8. Improve the quality of consumer goods so that the life span of such items as clothes, furniture and automobiles could be extended. Manufacturers could be forced to be responsible for whatever they produce for as long as it lasts. For example, they could be held responsible for repairing when needed and eventually for recycling the item when it was worn out. Manufacturers would be less likely to produce inferior goods. More effort would be made to produce goods of high quality and durability. The cost of goods would increase necessarily, but essential items could be produced by non-profit

agencies of the government.

9. Others (?) Can you think of a "creative action" not mentioned above?

LESSON 18

PURPOSE

To take action on the issue.

OBJECTIVES

1. Value

   Demonstrate understanding of the dilemmas of others as they attempt to make choices for work and leisure time.

2. Skill

   (a) Assist in a group project to relate conclusions about industrialization to preparation for leisure time.

   (b) Create a plan of action for use of leisure time in industrialized society.

MATERIALS

1. 35 copies - "Jobs Steal Youth, Principal Fears" (p. 234).
2. As required when taking action.

LENGTH

mimimum of 1 period.

PROCEDURE

1. If in the previous lesson, students felt motivated to take some specific action, allow them to pursue it, providing the action is consistent with constructive citizenship; otherwise, proceed with this lesson.
2. The average adult's day in an industrialized society can be broken down into three equal divisions: eight hours of work,

eight hours of sleep, and eight hours of free time. As industrial development continues into the automation stage of the Industrial Revolution, chances are that more of an adult's day will be spent on leisure activities. What action can we take to help us prepare for this eventuality?

3. Optional: (alternative actions for consideration)

Present the following specific actions in which students might become involved. Say to students:

(a) As we get older, generally the following leisure activities increase:

(i) reading newspaper

(ii) relaxing (dozing)

(iii) gardening

At the same time, others decrease in frequency:

(i) visiting friends and family

(ii) listening to music

(iii) going to the bar

(iv) dining out

(v) going to the theatre

(vi) playing active sports

(vii) watching sports

(viii) watching T.V.

How do you account for this? To what extent does your community provide recreational facilities for different age groups?

Analyze recreational facilities for the different age groups:

(i) 3-12 years

(ii) 13-29 years

(iii) 30-45 years

(iv) 45-60 years

(v) 60 +

If facilities are deficient in one or more of the age groups, what action can be taken? What kind of recreational programme could be organized?

(b) People often "moonlight" or occupy their days off from work at activities which others consider work. Many work overtime. Does this mean that these workers do not want as much free time or is it that they need more money for leisure? What is the dilemma adults face in determining how to spend their leisure time?

Interview adults in the community to find out why they choose to do this. Then, prepare an inventory of free or inexpensive recreational activities and make it available to the community.

(c) Despite the fact that leisure is an important part of our lives, schools spend very little time training us in ways of using this time. Why is this?

Examine each subject that you take for how well it prepares you for both work and leisure. Engage your teachers in a

discussion on this topic. Explore the Phys Ed programme at your school. What is the balance between team and individual sports? How well will skills in team sports prepare you for lifetime recreation? How many play team sports in adult life? If there appears to be an imbalance, speak to the Phys Ed teacher about what can be done. How well do extra-curricular activities contribute to lifetime skills in recreation? Why are they extra-curricular?

(b) Determine the extent to which schools and school systems are based on a "factory" approach to education. Draw up a comparison chart. Identify areas where your school could implement a new approach to school work in order to solve problems like absenteeism, vandalism, apathy, alienation, falling levels of productivity, and present these to your principal and student council.

(e) Read the article following. To what extent do jobs rob students of their youth? How do "working students'" values relate to materialism? To quality of Life? Would a poster campaign at school help these students question their decision to work while attending school?

JOBS STEAL YOUTH, PRINCIPAL FEARS

LETHBRIDGE (CP) - The high school student who holds down a part-time job is fast becoming typical and it may be a mistake, Graeme Wigg, Principal of Winston Churchill High School, said Wednesday.

Wigg told a local Canadian Mental Health Association luncheon that 62 per cent of his school's students work part time.

"Society has taken away the youth from teenagers", Wigg told more than 50 listeners.

We're so concerned about the pursuit of affluence we've lost sight of many important values."

Wigg said most high school students do not have to work, but the extra income relieves the family of its economic responsibilities and increases its financial independence.

"Don't get me wrong. I'm not saying it's not good to work a few hours a week after school, getting some firsthand experience in the work world. But it's gone beyond that."

Copyright: Canadian Press, March 24, 1979.

4. Conduct Part III: Teacher & Student Evaluation Checklist on the following page.

Teacher: _____ Student: _____

PART III: TEACHER & STUDENT EVALUATION CHECKLIST

The following areas reflect the objectives of this part of the unit. Rank each according to the following:

1. working up to ability, doing well (understands material)
2. could be working harder, do a little better
3. not really trying at all

NA not covered yet in this unit.

If there are large discrepancies between our ratings, we will meet for a conference.

		Rating
1.	Can explain how values such as materialism and quality of life affect the process of materialism.	_____
2.	Can decide whether continued advances in technology will enhance human welfare and use reasons to support the decision.	_____
3.	Can explain how an individual makes a decision about a complex issue.	_____
4.	Can identify some consequences of each of the alternative positions on the issue.	_____

		Rating
5.	Can suggest alternative solutions to problems associated with rapid industrial development.	_____
6.	Can see both sides of a dilemma about the use of leisure time.	_____
7.	Can contribute to group activity in relating conclusions about industrialization to preparation for leisure time.	_____
8.	Can suggest at least one plan of action for better use of leisure time in industrialized society.	_____

PART IV

Reflection

LESSON 19

PURPOSE

To review and reflect on what was learned and how it was learned.

OBJECTIVES

1. Value

   Judge the worth of applying learning to a personal lifestyle.

2. Knowledge

   Recall important content and processes of the unit.

3. Skill

   Assess the relationship between the unit and contemporary society.

MATERIALS

35 copies - Unit Evaluation (p. 241).

LENGTH

1-2 periods.

PROCEDURE

1. Review with students each part of the unit by:
   (a) asking quick recall questions orally on the information
   (b) identifying with the class important learnings (for example, can students recall important generalizations, concepts, and relationships between concepts?)
   (c) checking the wall charts to ensure each of the questions

have been dealt with. If they have not, can they be answered now? How many of them must remain unanswerable? Why?

(d) examining the processes used (for example, how did we go about developing research questions, hypothesizing, or resolving the issue? Can we list the steps?)

2. Distribute copies of the "Unit Evaluation" (p. 241). Tell students:

This checklist is intended to:

(a) provide feedback about how the class in general perceived the unit

(b) encourage you to think about how you learn. Do not write your name on the paper.

3. When students have completed the Unit Evaluation, tally the frequency of choices for each item and collect written comments. Make this information available to students. Elicit questions about the process of learning built into the unit and the importance of the learning as well.

EVALUATION

As a final activity, ask students to answer each of the following questions in paragraph form. Use this written work as a final evaluation for the Unit.

1. Where is society headed? (What trends do you see in industrial growth? How will society deal with conflicting values such as materialism and quality of life?)

2. How do I fit in? (What are my personal goals regarding work and leisure? What adjustments or changes will be necessary to your personal lifestyle given the trends predicted above?)

The following criteria may be used to evaluate the above:

Content:

Part A:	The Future	
1.	Industrial growth (minimum of 3 major trends)	6 points
2.	Conflict in values (minimum of 2 major areas of conflict)	4 points
Part B:	Personal Lifestyle	
1.	Goals (minimum of 2 goals for work and 2 for leisure)	8 points
2.	Adjustments (minimum of 2 adjustments needed, supported with reasons - justification)	8 points

Mechanics:

1.	Unity and coherence	2 points
2.	Spelling, grammar, punctuation	2 points
	TOTAL:	30 points

UNIT EVALUATION

TITLE OF UNIT: SHOULD WE LIMIT INDUSTRIAL GROWTH?

Checklist

Date: _____

1. If I had to describe this unit, I would use the words: (Check no more than two from this list.)

_____ easy
_____ confusing
_____ hard
_____ makes me think
_____ fun
_____ not very important
_____ other (What is it? _____)

_____ boring
_____ my favourite subject
_____ important to me
_____ related to problems today
_____ interesting

2. During the last six weeks in this unit, I spent most of my time: (Check three answers.)

_____ listening to what was being said
_____ bored
_____ interested
_____ asking questions
_____ answering teacher's questions
_____ confused
_____ other (What is it? _____)

_____ learning a lot of things I never knew before
_____ wishing we could go more slowly
_____ wishing we could go faster
_____ wanting more information
_____ taking part

3. During the last six weeks in this unit my class spent a lot of time: (Check three answers.)

_____ reading

_____ writing answers to questions

_____ having whole class discussions

_____ listening to the teacher

_____ working in small groups

_____ taking notes

_____ doing role-play, debates

_____ doing projects

_____ answering the teacher's questions

_____ other (What is it? _____)

4. I learned the most in this unit when I: (Check three answers.)

_____ read the books

_____ listened to the ideas of other students

_____ talked about my ideas with small groups

_____ listened to the teacher

_____ asked questions

_____ did the written exercises

_____ answered questions

_____ discussed with the class

_____ did small group projects

_____ gave my own opinions

_____ other (What is it? _____)

5. What I liked best about this unit was:

_____

_____

_____

6. What I liked least about this unit was:

_____

_____

7. During this unit I found it hard to: (Check as many as you wish.)

_____ understand what I read in some of the books

_____ take part in class discussions

_____ work well in small groups

_____ explain to the teacher what I was confused about

_____ ask questions

_____ take part in role-play, debates

_____ express my opinion

_____ remember what I had read in the books

_____ learn the names of people and places studied

_____ read diagrams and charts

_____ use outside source materials

_____ other (What is it? _____)

8. To do well in this unit I had to: (Check as many as you wish.)

_____ memorize all the facts in the books

_____ read well

_____ ask questions

_____ take part in discussions

_____ remember everything the teacher said

_____ agree with the teacher

_____ write well

_____ other (What is it? _____)

_____ do extra projects

_____ try to be as quiet as possible

_____ bring in extra information

_____ answer a lot of the teacher's questions

_____ use evidence to support my position

_____ listen and remember what others think

9. In this unit, my classmates and I asked: (Check one answer.)

_____ many questions _____ a few questions

_____ hardly any questions

10. In this unit we worked in small groups: (Check one answer.)

_____ often _____ sometimes

_____ never

11. In this unit I preferred to work: (Check one answer.)

_____ by myself _____ in a small group

_____ with one big group (whole class)

12. This unit was: (Check as many as you like.)

_____ related to my life

_____ more related to my parents' lives

_____ important to my understanding of our society

13. The most important thing I have learned in this unit is:

_____

_____

_____

14. If I could change anything about this unit, I would do the following: _____

_____

_____

_____

PART V

Appendix

SELECTED FILMS

Computers

Describes the major components of a modern computer and explains how the binary number system is useful in computer technology.

Released by BFA - 1970

11 minutes colour uejr

Computers and You

Introduces computers, what they are, their operational functions, and what they can do. Examines the advantages of computers and points out how they can best serve various needs.

Producer - Goldberg - Werrenrath - 1972

15 minutes colour uejrsr

Free Enterprise

In animated form, two boys and a girl learn the principal components of the free enterprise system and how to relate and apply terms such as gross profit, net profit, risk capital.

Producer - Grant Evans - 1973

13 minutes colour jr

Living Machine - part 2

Explores the impact of computer technology on our society.

28 minutes b/w jrsr

Machine

A wordless, chilling, and deftly animated allegory on man, his inventions and the whole competitive system.

Producer - Wolfgang Urcas - 1971

10 minutes colour jrsr

The Man on the Assembly Line - NFB

A dramatized look at the man who ultimately pays the price for the benefits associated with our modern mass production - in this case, a worker in an automobile factory who performs one operation with relentless monotony so that the assembly line may keep moving at top efficiency. NFB.

29 minutes b/w

The Skilled Worker - MFB

Examines the inroads of automation on whole areas of satisfaction and reward in work, as exemplified in the story of a craftsman who finds his skills displaced by a machine.

29 minutes b/w

What is a Computer?

Uses animation to dispel some of the mysteries about how a computer operates.

Producer - Encyclopaedia Britannica - 1970

19 minutes colour jrsr

TEACHING UNIT EVALUATION

BY TEACHERS

The attached evaluation questionnaires will help assess the worth of the teaching units in achieving the goals of Alberta social studies education and to provide data that will be useful in assessing the 1978 Alberta Social Studies Curriculum over a two-year period.

Teachers are requested to send the completed questionnaire to the Social Studies Consultants at the Regional Office at Alberta Education in their area.

Regional Offices are located at:

Grande Prairie Regional Office
Alberta Education
10014 - 99 Street
GRANDE PRAIRIE, Alberta
T8V 3N4

Edmonton Regional Office
Alberta Education
10053 - 111 Street
EDMONTON, Alberta
T5K 2H8

Calgary Regional Office
Alberta Education
615 MacLeod Trail, S.E.
CALGARY, Alberta
T2G 4T8

Red Deer Regional Office
Alberta Education
4th Floor
Royal Trust Building
4814 Ross Street
RED DEER, Alberta
T4N 1X4

Lethbridge Regional Office
Alberta Education
Provincial Building
200 - 5 Avenue, South
LETHBRIDGE, Alberta
T1J 4C7

TEACHING UNIT EVALUATION

BY TEACHERS

Part I: Identification Data

Title of Teaching Unit _____

Date of Evaluation _____

Number of Times Unit Was Taught _____

School Size _____

Years of Teaching Experience _____

Part II: Overall Evaluation of the Teaching Unit

A. Format, Process

For items 1-13, please rate the unit in terms of the following aspects, by circling the appropriate number on the right.

		(Poor) 1 2 3 4 5 (Excellent)
1.	Appropriateness of teaching unit to level and ability of students.	1 2 3 4 5
2.	Clarity of directions and procedures.	1 2 3 4 5
3.	Adequacy of the treatment of subject matter.	1 2 3 4 5
4.	Production quality of prescribed resources.	1 2 3 4 5
5.	Integration of prescribed resources with print materials.	1 2 3 4 5
6.	Production quality of teaching unit.	1 2 3 4 5
7.	Appropriateness of length of the unit.	1 2 3 4 5
8.	Appropriateness of general format of the unit (layout).	1 2 3 4 5

9.	Opportunities for evaluation of students' progress in the unit.	1 2 3 4 5
10.	Variety of teaching/learning activities.	1 2 3 4 5
11.	Degree to which the unit captured the interest of students.	1 2 3 4 5
12.	Clarity and suitability of objectives.	1 2 3 4 5
13.	Overall evaluation of unit (materials, format and process).	1 2 3 4 5

B. Relationship to Curriculum

Please state your view of the points in items 14-25 by circling the appropriate number on the right.

		(very little) 1 2 3 4 5 (a great deal)
14.	Extent to which the unit involved students in making decisions.	1 2 3 4 5
15.	Degree to which a "balance of viewpoint" was presented in the unit.	1 2 3 4 5
16.	Extent to which the unit helped students to see the role that values play in making decisions.	1 2 3 4 5
17.	Extent to which students increased their sensitivity to their own value positions.	1 2 3 4 5
18.	Extent to which the unit helped to clarify the Alberta Social Studies Curriculum to you as a teacher.	1 2 3 4 5
19.	Extent to which the unit has helped to develop inquiry and participation skills in students.	1 2 3 4 5
20.	Extent to which the unit made you, as a teacher, more aware of ways to teach using an issue-centred approach.	1 2 3 4 5

21.	Extent to which the unit could act as a model for you to use in developing your courses in future.	1 2 3 4 5
22.	Extent to which the unit served as an exemplary treatment of the topic in the curriculum.	1 2 3 4 5
23.	Extent to which students became involved in action on decisions.	1 2 3 4 5
24.	Extent to which the unit "process of inquiry" (awareness, focus on issue, research, decision, action) provided for a meaningful examination of a social issue.	1 2 3 4 5
25.	Extent to which your view towards and inquiry approach has been made more positive (through using this unit).	1 2 3 4 5

C. Written Comments

Please use this section to comment in detail on any points raised in the survey. We would be especially interested in knowing if the unit enabled you to teach the Alberta Social Studies Curriculum more effectively.

STUDENT EVALUATION OF TEACHING UNIT

A. Instruction: For each of the following, circle the response which best represents your view.

Example:

My view of football is that I: (dislike it very much) 1 2 3 4 5 (like it very much)

If you liked it very much, you would circle 5.

If you disliked it very much, you would circle 1.

If you disliked it somewhat more than you liked it, you would circle 2.

1.	I would say that this unit was:	(hard)	1	2	3	4	5	(easy)
2.	This unit was:	(very boring)	1	2	3	4	5	(very interesting)
3.	This unit:	(did not make me think)	1	2	3	4	5	(made me think a lot)
4.	This unit was:	(too short)	1	2	3	4	5	(too long)
5.	In this unit there was:	(not enough discussion)	1	2	3	4	5	(too much discussion)
6.	In this unit there was:	(not enough reading)	1	2	3	4	5	(too much reading)
7.	In this unit there was:	(not enough group work)	1	2	3	4	5	(too much group work)
8.	In this unit I had:	(not enough decisions)	1	2	3	4	5	(too many decisions)
9.	In this unit I learned:	(very little)	1	2	3	4	5	(a great deal)

10. The prescribed resources for this unit were: (poor) 1 2 3 4 5 (excellent)

11. The written materials on this unit were: (poor) 1 2 3 4 5 (excellent)

12. We went through this unit: (too slowly) 1 2 3 4 5 (too quickly)

13. This unit had: (no variety) 1 2 3 4 5 (much variety)

14. This unit made me: (want to forget the topic) 1 2 3 4 5 (want to learn much more about it)

15. Looking back, I would say that I: (did not enjoy unit at all) 1 2 3 4 5 (enjoyed it a great deal)

B. Please write your views on the following three items in the space provided.

1. What I liked <u>most</u> about this unit was:

_____

_____

2. What I liked <u>least</u> about this unit was:

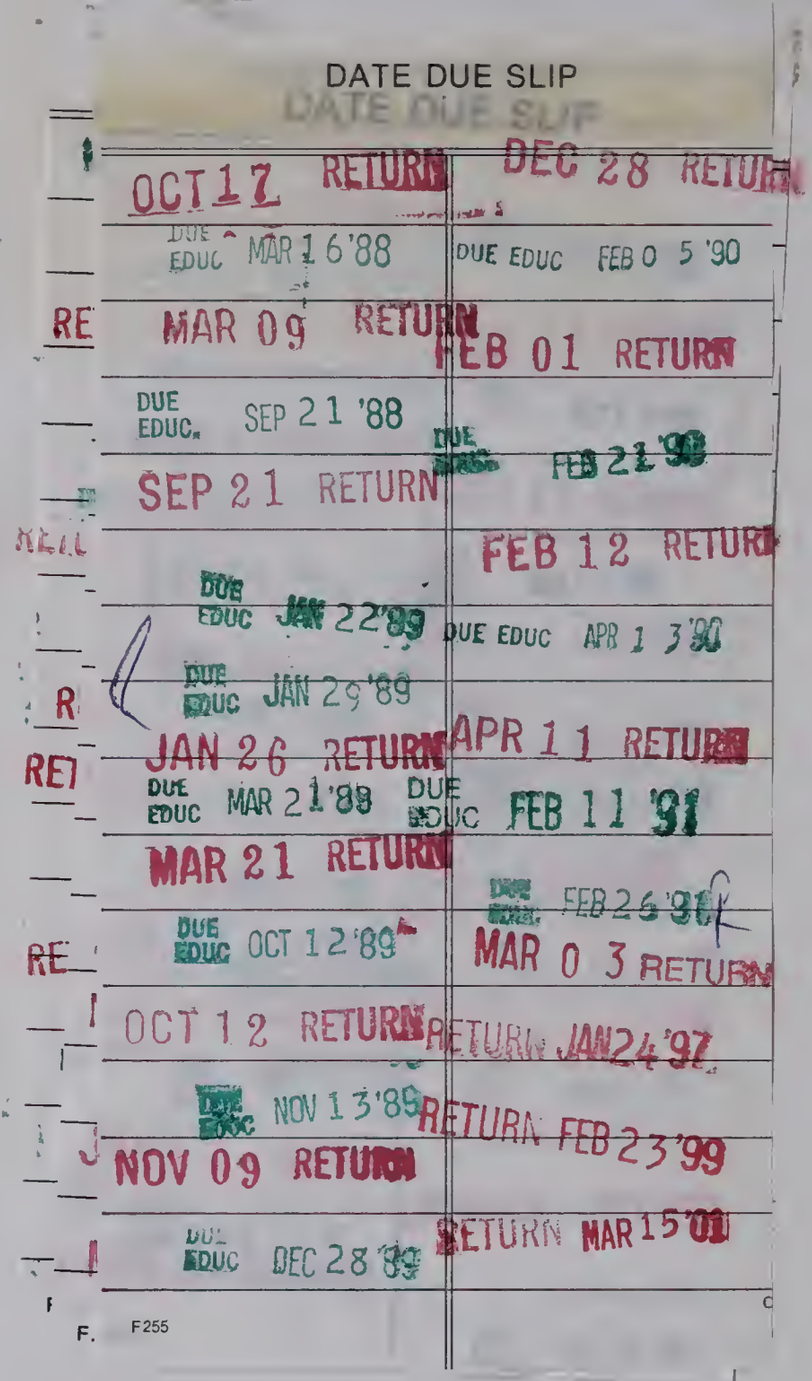
_____

_____

3. The <u>changes</u> I would make in this unit are:

_____

_____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OCT 17 RETURN
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JAN 26 RETURN
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OCT 12 RETURN
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DEC 28 RETURN
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FEB 01 RETURN
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FEB 12 RETURN
DUE EDUC APR 13 '90
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DUE EDUC FEB 11 '91
DUE EDUC FEB 26 '91
MAR 03 RETURN
RETURN JAN 24 '97
RETURN FEB 23 '99
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Social studies teaching unit
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